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FIGS. 1—4 MISSEL THRUSH
5—9 SONG THRUSH
10—17 BLACKBIRD

FIGS. 18—19 RING OUZEL
20 WHEATEAR.
21—22 WHINCHAT.
23 STONECHAT

FIGS. 24 REDSTART.
25—28 REDBREAST
29—31 NIGHTINGALE

Figs 32—34	Whitethroat.	
35—37	Lesser Whitethroat	
38—41	Blackcap	
42—44	Garden Warbler	
45	Dartford Warbler	
46—48	Golden-Crested Wren	
Figs 49—51	Chiffchaff	
52—54	Willow-Warbler.	
55	Wood-Warbler	
56—57	Reed-Warbler	
58—60	Marsh-Warbler	
61—62	Sedge-Warbler	
63	Grasshopper Warbler	
Figs 64	Savi's Warbler	
65—67	Hedge-Sparrow	
68	Bearded Reedling	
69	Long-Tailed Tit	
70	Dipper	
71—72	Great Tit	

Figs.	73—75	Coal Tit.	Figs.	91	Pied Wagtail.	Figs.	102 Rock-Pipit.
	76—77	Marsh-Tit.		92	White Wagtail.		103 Golden Oriole.
	78—81	Blue Tit.		93	Grey Wagtail.		104—108 Red-Backed Shrike.
	82	Crested Tit.		94	Blue-Headed Wagtail.		109 Woodchat Shrike.
	83—84	Nuthatch.		95—96	Yellow Wagtail.		110 Pied Flycatcher.
	85—87	Wren.		97—100	Tree-Pipit.		111—113 Spotted Flycatcher.
	88—90	Tree Creeper.		101	Meadow-Pipit.		

FIGS. 114—116 SWALLOW.
117 MARTIN.
118—119 SAND-MARTIN.

FIGS. 120—125 GREENFINCH.
126—128 HAWFINCH.
129—130 GOLDFINCH.
131 SISKIN.

FIGS. 132—143 HOUSE-SPARROW.
144—147 TREE-SPARROW.
148—155 CHAFFINCH.

BIRDS

OF

GREAT BRITAIN AND IRELAND

ORDER PASSERES, COMPLETE IN TWO VOLUMES,

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2 Pages of Introduction.
210 Pages of Descriptive Text.

CONTENTS.

Those marked thus, * not being recognised as British Birds, are not figured.

Accentor collaris - - - - 133
Accentor modularis - - - - 129
Acredula caudata - - - - 145
Acrocephalus aquaticus - - - 120
Acrocephalus palustris - - - 111
Acrocephalus phragmitis - - - 116
Acrocephalus streperus - - - 107
**Acrocephalus turdoides* - - - 115
**Aëdon galactodes* - - - - 105
Alpine Accentor - - - - 133
*American Robin - - - - 28
Anthus campestris - - - - 201
**Anthus cervinus* - - - - 201
Anthus obscurus - - - - 207
Anthus pratensis - - - - 196
Anthus richardi - - - - - 204
**Anthus spipoletta* - - - - 207
Anthus trivialis - - - - 193
Aquatic Warbler - - - - 120

Barred Warbler - - - - 77
Bearded Reedling - - - - 141
Blackbird - - - - - 19
Blackcap - - - - - - 69
Black Redstart - - - - 44
*Black-Throated Thrush - - - 27
*Black-Throated Wheatear - - 33
Blue-Headed Wagtail - - - 186
Blue-Tit - - - - - - 158

**Calliope camtschatkensis* - - - 128
Certhia familiaris - - - - 173
Chiffchaff - - - - - - 96
Cinclus aquaticus - - - - 137
Coal-Tit - - - - - - 151
Crested-Tit - - - - - 162
Cyanecula suecica - - - - 48

Dartford Warbler - - - - 81
Daulias luscinia - - - - 56

*Desert Wheatear - - - - 33
Dipper - - - - - - 137

Erithacus rubecula - - - - 52

Fieldfare - - - - - - 14
Fire-Crested Wren - - - - 88

Garden Warbler - - - - 72
Golden-Crested Wren - - - 84
Grasshopper Warbler - - - 122
*Great Reed-Warbler - . - 115
Great Tit - - - - - 147
Grey Wagtail - - - - 183

Hedge-Sparrow - - - - 129
**Hypolais icterina* - - - - 106

*Icterine Warbler - - - - 106
*Isabelline Wheatear - - - - 32

Lesser Whitethroat - - - - 65
Locustella luscinioides - - - 126
Locustella nævia - - - - 122
Long-Tailed Tit - - - - 145

Marsh-Tit - - - - - 154
Marsh-Warbler - - - - 111
Meadow-Pipit - - - - - 196
Missel Thrush - - - - 3
Motacilla alba - - - - - 181
Motacilla flava - - - - - 186
Motacilla lugubris - - - - 177
Motacilla melanope - - - - 183
Motacilla raii - - - - - 189
**Monticola saxatilis* - - - - 28

Nightingale - - - - - 56
Nuthatch - - - - - - 165

*Orphean Warbler - - - - 68

Panurus biarmicus - - - - - 141
Parus ater - - - - - 151
Parus cæruleus - - - - - 158
Parus cristatus - - - - - 162
Parus major - - - - - 147
Parus palustris - - - - - 154
Phylloscopus rufus - - - - 96
Phylloscopus sibilatrix - - - 102
Phylloscopus superciliosus - - - 92
Phylloscopus trochilus - - - 99
Pied Wagtail - - - - - 177
Pratincola rubetra - - - - 33
Pratincola rubicola - - - - 37

Redbreast - - - - - - 52
Red-Spotted Bluethroat - - - 48
Redstart - - - - - - 40
*Red-Throated Pipit - - - - 201
Redwing - - - - - - 11
Reed-Warbler - - - - - 107
Regulus cristatus - - - 84
Regulus ignicapillus - - - 88
Richard's Pipit - - - - 204
Ring-Ouzel - - - - - 25
Rock-Pipit - - - - - 207
*Rock-Thrush - - - - - 28
*Rufous Warbler - - - - 105
Ruticilla phœnicurus - - - - 40
Ruticilla titys - - - - - 44
*Ruby-Throated Warbler - - - 128

Savi's Warbler - - - - 126
Saxicola œnanthe - - - - 29
**Saxicola deserti* - - - - - 33
**Saxicola isabellina* - - - - 32
**Saxicola stapazina* - - - - 33
Sedge-Warbler - - - - - 116
*Siberian Ground Thrush - - - 28
Sitta cæsia - - - - - 165

Song Thrush - - - - - 7
Stonechat - - - - - - 37
Sylvia atricapilla - - - - 69
Sylvia cinerea - - - - 62
Sylvia curruca - - - - - 65
Sylvia hortensis - - - - 72
Sylvia nisoria - - - - - 77
**Sylvia orphea* - - - - - 68
Sylvia undata - - - - - 81

Tawny Pipit - - - - - 201
**Tichodroma muraria* - - - 176
Tree-Creeper - - - - - 173
Tree-Pipit - - - - 193
Troglodytes parvulus - - - - 169
**Turdus atrigularis* - - - - 27
Turdus iliacus - - - - - 11
Turdus merula - - - - - 19
**Turdus migratorius* - - - - 28
Turdus musicus - - - - 7
Turdus pilaris - - - - - 14
**Turdus sibiricus* - - - - 28
Turdus torquatus - - - - 25
Turdus varius - - - - - 17
Turdus viscivorus - - - - 3

*Wall-Creeper - - - - - 176
*Water-Pipit - - - - - 207
Wheatear - - - - - - 29
Whinchat - - - - - 33
White's Thrush - - - - 17
Whitethroat - - - - - 62
White Wagtail - - - - - 181
Willow Warbler - - - - 99
Wood Warbler - - - - 102
Wren- - - - - - - 169

Yellow-Browed Warbler - - 92
Yellow Wagtail - - - - 189

BIRDS

OF

GREAT BRITAIN AND IRELAND

ORDER PASSERES.

THIS group of Birds has always been a favourite with me, as with most students of the feathered race. I have taken and preserved both nests and eggs of most of the British species, and have studied the habits of many of them in captivity, as well as in a wild state.

The Order Passeres (following the classification adopted by Howard Saunders in his admirable "Illustrated Manual") includes seventeen families, the members of which are mostly suitable for aviary or cage-life; of these the *Turdidæ* (Thrush-like birds), the *Fringillidæ* (Finches), and *Alaudidæ* (Lark-like birds) find favour with the larger number of Aviculturists.

The family *Turdidæ*, the first on our list, has been sub-divided into three sub-families:—

1.—*Turdinæ* (Thrushes) in which the first plumage is spotted above and below. The males with long slender bills as compared with the females, in which they are distinctly broader and shorter.

2.—*Sylviinæ* (Warblers) in which the young closely resemble their parents excepting in their paler or duller colouring. The width of the bills differs little in the sexes, but that of the female is distinctly shorter.

3.—*Accentorinæ* (Accentors) including our so-called "Hedge-Sparrow," birds which, though spotted after the manner of true Thrushes when they leave the

nest, exhibit affinity to the Titmice in their strong straight subconical bills, rounded wings with short bastard primary (the first feather in the wing), and strong scaled feet: the latter have the outer and middle toes united and the upper extremity of the tarsus is feathered. Bills of the sexes much alike, that of the female perhaps a trifle the longer.

In their habits the Accentors seem to me more nearly to resemble the Tits than the Thrushes. Not only do their quick jerky movements and acrobatic actions remind one of the former; but, like the Tits, they are largely seed-eaters.

The Thrushes of Great Britain are represented by eight genera:—*Turdus* (Thrushes so-called); *Monticola* (Rock-Thrushes); *Saxicola* (Wheatears); *Pratincola* (Chats); *Ruticilla* (Redstarts); *Cyanecula* (Blue-throats); *Erithacus* (Redbreasts); and *Daulias* (Nightingales).

The more typical Thrushes are the largest members of the Sub-family; they are bold, handsome, strongly-built birds, with a vigorous direct flight, at times somewhat sinuous but generally in a straight line. On the earth they proceed, either by running for short stages, with the head depressed and neck somewhat extended (but, at the end of each stage, assuming an erect and attentive posture, sometimes with a simultaneous elevation of the tail); or, if in a hurry, they clear the ground by long hops. Some of these are admirable songsters, and consequently are greatly sought for as cage-birds.

Excepting in very severe weather, Thrushes are very shy of entering traps; they also show considerable cunning in upsetting some forms of net-traps, especially that known to bird-catchers as the "Caravan": indeed it is rare to find any but birds of the year caught by this ingenious contrivance. This fact is perhaps rather an advantage than otherwise to the trapper, for young birds not only become more rapidly reconciled to captivity, but naturally last longer, as song-birds, than those which have spent several years of their lives in freedom.

All the typical Thrushes build open cup-shaped nests, the walls of which are strongly built, usually with a lining of mud, clay, or cow-dung, and in most cases with a thick outer lining concealing the mud: the eggs usually number from four to six and, more frequently than not, are of some shade of green marked with some shade of brown.

A. G. BUTLER.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE MISSEL THRUSH.

Turdus viscivorus, LINN.

THIS, the largest of our resident Thrushes, breeds throughout the suitable districts of temperate Europe, from Norway southward to Spain, and even to Northern Africa. Eastward, its range extends through Turkestan to the North-western Himalayas and Lake Baikal in Siberia; it is resident in many of the milder regions, but the greater number winter in Southern Europe and Northern Africa, the Siberian birds migrating to Northern India, Persia, and Africa north of the Sahara.

In Great Britain the Missel Thrush is generally distributed throughout England and Wales; in Ireland also, since 1800, it has become tolerably common; in Scotland its range has gradually extended northwards throughout most of the Hebrides; in the Orkneys it has appeared after easterly gales, but from Shetland it has not been recorded.

The upper parts of the adult bird are greyish olive brown, slightly darker on the head, and slightly more golden on the lower back; the variation of tint is, however, barely perceptible; the under parts (excepting the chin and throat, which are white, and the cheeks which are buffish white) are buff, strongly pronounced in young birds, but growing paler year by year until, in old birds, it becomes buffish white; the fore-chest and flanks are of a deeper buff, the cheeks and sides of neck indistinctly streaked with greyish brown and a few spear-shaped spots; on the chin and throat the spots are more arrow-shaped, on the fore-chest black and spear-shaped, and on the remainder of the under parts fan-shaped; the upper wing-coverts are broadly edged at the tips with dull white, the flights are slaty-grey, the primaries with white outer edges, the secondaries externally suffused with buffish, and narrowly tipped with white; under wing-coverts and axillaries pure white; tail feathers smoky-grey, narrowly pale-edged towards the tips; bill dark brown, paler towards the base, especially on the lower mandible; legs pale brown;

iris dark brown. The female is more thick-set than the male, and has a thicker shorter bill.

The Missel Thrush may be met with in almost any locality where trees are to be found, in woods, coppices, plantations, parks, pleasure-grounds, shrubberies, large gardens and orchards; in such places it makes its home and brings up its family. The nest is frequently built either in the fork of a branch or on the top of a strong horizontal bough, but perhaps the favourite site is in the central hollow, formed by the branching off of the lichen-covered boughs of some old apple tree. In the experience of the writer it is rare to find this nest either in a very lofty or lowly position, but on one occasion he saw it in a forked branch near the top of a tall elm tree in Hyde Park; whilst, on the other hand, the late Mr. E. T. Booth once observed it in a small stunted bush within three feet of the ground. Instances of this bird building in bushes are, however, extremely rare. Most nests will be found at an altitude of from ten to fifteen feet.

The structure of the nest of the Missel Thrush is very solid, not unlike that of the Blackbird. It is frequently placed upon a foundation of mud, sheep's wool and twigs. The outer walls are usually formed of twigs, roots, straws, and grasses, sometimes interwoven with wool and coarse moss; within this is a lining of mud or clay, brought in pellets and mixed with grass or roots. The inner lining is composed of finer grass, roots, and sometimes a little moss. When lichens abound on the tree where the nest is situated a few pieces are occasionally used to ornament the exterior, but one can hardly suppose that a bird which places its nest almost invariably in a conspicuous position, would make this addition with a view to concealment, although, by rendering the outer walls of its domicile more like the branch on which it rests, this result is, in a measure obtained.

The number of eggs laid by the Missel Thrush varies from three to five, but four is the usual number. The colouring is rather suggestive of those of the Chaffinch, the ground colour being either pale greenish blue, yellowish green, or brownish flesh tinted, boldly speckled, spotted and often blotched with deep chocolate brown, and showing pearl grey or lavender underlying spots; in size they correspond very nearly with those of the Blackbird, but as regards their outline they more often give one the impression of being widest near the centre, than the eggs of that species.

The pairing time of the Missel Thrush is early in February, and at this season, like most birds, they are exceedingly quarrelsome; the first nest is occasionally commenced before the end of the same month, but only in the

South of England, where the bird is generally double-brooded; in my own experience its nidification extends from March to May, April being the month when most nests are to be found.

If disturbed when sitting, the Missel Thrush is very noisy, but any attempt to interfere with the young is the signal for a perfect uproar; then too is the time to watch the perfect flight of this powerful bird as he sweeps round in wide circles, or, as the intruder stoops to examine the nest, flashes through the very branches close to his head; uttering wild guttural curses and shrieking out horrid oaths: well has this bird earned its titles of "Screech Thrush" and "Holm screech."

The song of the Missel Thrush is wild, powerful and not without melody, although somewhat monotonous; it is uttered from early autumn until its nesting duties commence; and, wet or fine, from early dawn to dewy eve, its rich notes may be heard; in the wildest and stormiest weather, it tries to raise its voice above the uproar of the elements; on which account the well-known name of "Stormcock" has been bestowed upon it. In the East Riding of Yorkshire it is called "Charley Cock."

The food consists of berries, small fruits, seeds, snails, slugs, worms, larvæ and insects. It is especially fond of the berries of the mountain ash, and after these it chooses those of the hawthorn or ivy; the berries of the mistletoe, to which it owes its name of Mistletoe Thrush, or Missel Thrush, are rarely eaten by it; during the autumn when grain is being sown, this bird eats it greedily, a fact which should be borne in mind by those who keep cage birds, many of whom labour under the delusion that because a bird is called "insectivorous" it should have no farinaceous food. As a matter of fact, many "insectivors," when kept in the same aviary with seed-eating birds, swallow quantities of seed.

Excepting when feeding, the Missel Thrush spends most of its time either in trees or shrubs, it is a somewhat shy bird, though bold in defence of its young, it having been known to drive predaceous birds from the vicinity of its nest by the impetuous and noisy attacks which it has made upon them. Moreover, it always seeks its food in the open fields, not skulking along under hedges and shrubs after the manner of the Song Thrush. In captivity it soon becomes tame and confiding, and if reared from the nest, it is quite as friendly and playful towards its owner as a Canary.

In May, 1886, during a birds'-nesting expedition in Kent, I came across a nest of the Missel Thrush containing two young birds, in an old apple orchard. With the assistance of the owner, upon whose shoulders I climbed, I succeeded in pulling myself up into the lower branches, when it was easy to

climb to that which bore the nest: the question now was, how to get the young birds into my basket without injury; however as I leaned over the nest, the youngsters quickly settled the difficulty by leaping out and fluttering to the earth, screaming loudly the while. What with the old and young birds together, the noise was something to be remembered.

I reared both these birds without the slightest trouble, upon snails (dropped into boiling water, taken from their shells, and cut into small pieces,) small worms, and a paste made of oat-flour, known as "fig-dust," and fine pea-meal; as they grew older, however, they refused both worms and large snails, though they would readily swallow small living snails in their shells. They also ate both hawthorn berries and wheat greedily, subsequently ejecting the seeds of the former and the tough skin of the latter from the crop with considerable force, so that I have frequently found the ejected pellets several feet from their cage.

These two birds proved to be unmistakably a pair, the male having a distinctly narrower head, slimmer build, more alert carriage and more masterful disposition; indeed, after a time, he so tormented his companion, pulling out her feathers and scolding whenever she approached him, that when a friend took a fancy to her, I gladly gave her away.

As the male bird gained strength, I gave him, as staple food, a mixture of oat-flour, pea-meal, and Spratt's food (crushed dog biscuit), moistened with sufficient water to form a crumb-paste; on this diet he lived, with the addition of an occasional insect or earthworm, and throve amazingly for nearly four years, never having a day's illness, and always being ready for a frolic. If I put my finger into his cage he would put one foot on it and thus holding it down would flap his wings and hammer it with his bill: when I wished to move him from one cage to another, he never attempted to get away until I had grasped him firmly, then indeed he would kick a bit and utter his harsh guttural call.

At length, in 1890, when my friend was three years and nine months old, I was persuaded to send him to a show, but, unhappily, he who had never tasted a particle of flesh was fed entirely on a mixture of finely minced raw beef mixed with breadcrumbs; the result may be imagined—he had incessant fits during the week of the show, was returned to me in a state of apoplexy and died in a fit about an hour after he reached home. Never give raw flesh to any but predaceous birds.

Although hand-reared birds may make amusing pets, unless taught by a wild bird, they never learn the wild song; my Missel Thrush only sang

Song Thrush

two notes, one high, the other low, its song was far behind that of the Ox-eye Tit for melody. There is not the least trouble in keeping and taming wild Thrushes. They sulk at first, but a few lively worms quickly induce them to feed.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE SONG THRUSH.

Turdus musicus, LINN.

FOUND throughout the Palæarctic Region, but rare in the extreme East, generally migratory in Western Europe, though resident in some countries; generally distributed throughout the British Islands, though of rare occurrence in the Shetlands. In England this bird is a partial migrant, great numbers travelling southward late in the autumn but returning to their old haunts at the first sign of spring weather; nevertheless, a considerable number remains with us during the winter.

The adult bird above is deep olive-brown, the wing coverts tipped with bright deep buff, under parts mostly white, the cheeks somewhat yellowish, streaked with brown; the breast and sides ochraceous buff, boldly marked with fan-shaped black spots; spots on the white ventral surface of the body more elongated, spindle-shaped and less numerous; bill dark brown, paler at the base of the lower mandible; legs pale brown, iris brown. The female resembles the male, but has a slightly broader head and thicker bill. Nestlings differ from adults in having the upper parts mottled with buff.

Wherever there is cover, you may expect to see the Song Thrush, he is

fond of shrubberies, hedgerows, and all places which afford partial concealment. Watch him in the garden, you will see him running down a path, stopping after every few feet to look cautiously around; now he spies a large bush or evergreen upon a bed to right or left and suddenly darting under it commences to dig vigorously for worms; presently he appears again upon another path running as before and again disappearing in like manner, he rarely remains very long in the open, yet is less skulking than his cousin, the Blackbird.

Sometimes the Song Thrush proceeds by a series of hops, but certainly not always. He frequently runs as above described, but never walks sedately after the manner of a Starling; even when seeking for worms in a meadow or on a grass-plot he hops, and so he does when crossing a flower bed; but on a path, I have rarely known this Thrush to move in any other way but by running.

The nest of the Song Thrush is usually built low down in the fork of a young tree, a shrub, especially an evergreen, the lower branches of old yew trees are also frequently selected as a building site. Occasionally, a nest may be seen among matted creepers, or even in the upper twigs of a rude wattle fence forming the walls of a country cart-shed. In hawthorn hedges, on ivy-covered walls, among stunted willows by streams, in crevices of rocks, or at the roots of a tuft of heather it may also be met with. The formation of the nest is somewhat different from that of the other British Thrushes. Externally, it is somewhat similar, being formed of slender twigs, roots, grasses, dead leaves, and moss; but internally it has a lining of mud and rotten wood or cow dung, so neatly rounded and smoothed off, that it much resembles the interior of half a large cocoa-nut shell. This deep smooth cavity is produced in the most simple manner, namely; by the hen-bird squatting down and turning round and round in it whilst the lining is soft.

The number of eggs laid by the Song Thrush varies from three to six, but five is the usual number; where only three eggs are deposited, it is probable that the first nest has been taken and a second one built immediately. In such cases I have known the new home to be built and lined in two days, the first egg being deposited whilst the mud lining was still moist; but the Song Thrush rarely builds in less than three days. In the case of this and all species at the beginning of the breeding season, a commencement of building operations is frequently made before the mother is nearly ready to lay. A nest is started and pulled to pieces, or deserted in an unfinished condition; this playing at building has given careless observers, or such as

have not noted, year by year, the building of nests by the same species, an exaggerated idea of the time required for the construction of bird-homes.*

The colouring of the eggs of *Turdus musicus* is greenish blue, with distinct deep brown (almost black) spots; usually scattered sparsely over the larger end, though sometimes over the whole surface, or only on the smaller end; spotless examples occur also, but rarely, though I have taken entire clutches without marking; on the other hand some eggs are heavily blotched, and one which I have represented on Plate XXXVII of my "Handbook of British Oology," has these blotches so arranged as to form an irregular half-zone towards the larger end. The form of the eggs of this species usually varies between a short pear-shape and a true oval; in size they differ a good deal, probably the largest eggs are deposited by the older birds. Incubation lasts from fourteen to fifteen days.

When sitting, the hen Song Thrush is not easily scared from her nest; possibly she may dread to uncover her very conspicuous eggs, and may hope that her protective colouring and absolute stillness will serve to conceal them; so she sits close, her bill pointed upwards above one side of her castle, her tail cocked up over the other, until one may almost put one's hand upon her; then suddenly she is gone like a shadow, usually without noise,† and the bright spotted eggs are exposed to view.

Without doubt the comparative difficulty of flushing the Song Thrush does tend to its preservation: even a Naturalist, unless he is a birds'-nester, often fails to notice the nest; though, when one has acquired eyes to recognize birds' homes at a glance, it seems marvellous that so conspicuous an object, and one so common in well-wooded country, can fail to be observed.

The Song Thrush is one of the earliest birds to sing and also go to nest; in unusually mild seasons it will build as early as February, but March to August may be considered its breeding season, May and June being the months when nests of this bird are most abundant.

The song of the Throstle or Mavis (as North countrymen call it) is very loud; so much so, that in a room or conservatory its notes are almost unbearable; in the open, however, they are cheerful and inspiring, though somewhat monotonous, each phrase being repeated at least four times in succession, and occasionally (more especially when the musician has hit

*Dixon mentions the fact of the Song Thrush, after being robbed of its first nest, building in succession no less than three perfectly constructed nests within five days.

† Seebohm states that, when put off her nest "her harsh cries and active motions, with those of her mate, awaken the silent woods, and speak most plainly of the anxiety of the birds for their treasure." I have not found this to be the case, excepting where the young were almost ready to fly, and only when they have uttered a cry of alarm.

upon something novel), as many as seven or eight times. To my mind the song is rather joyous and vigorous, than melodious: when heard at early dawn as one wakens, it pleases the first time, annoys the second, irritates the third, and finally becomes an intolerable nuisance: the Blackbird's melody, on the contrary, is always welcome. As one lies in bed trying to sleep, the whistle of the Song Thrush resolves itself into short sentences. I remember one particular bird which bothered me for weeks; in all weathers he would sit on a tree, within sight of my bedroom window, shouting as follows:—*Deal o' wet, deal o' wet, deal o' wet, deal o' wet; I do,* (pronounced *dough* as if he were trying to say *know* with a cold), *I do, I do, I do; Who'd do it? Who'd do it? Who'd do it? Who'd do it? Pretty dick, pretty dick, pretty dick, pretty dick,*" and so on *ad nauseam.*

The food of the Song Thrush, when at liberty, consists of insects and their larvæ or pupæ, worms, snails, berries, and seeds; in the spring and summer living food is preferred, but towards autumn and throughout the winter, berries and grain when procurable, are devoured, husks and hard kernels being ejected some five or ten minutes after the food has been swallowed; thus it is that woody seeds like that of the hawthorn are carried far from the parent tree, to spring up and make the unthinking wonder whence they came.

In captivity the Song Thrush sings quite as well as in its native haunts, indeed, a good bird often continues his song from November to the end of July; but if it is to reproduce the wild notes, it must be a wild-caught bird; for a nestling, brought up by hand, either sings a few short monotonous sing-song phrases; or, if it be a vigorous bird, brought up amongst other feathered companions, it shouts out the most deafening, though sometimes comical jumble of notes imaginable. My experience of hand-reared birds as compared with those caught wild is also unfavourable to the former in other respects, I have found them vicious and domineering in an aviary, dirty and wasteful in a cage; they are always more wild than a cage-moulted trapped bird. The latter, after its first moult, becomes gentle, confiding, and neither wasteful nor dirty; it has even been trusted in an aviary with small Finches, and I have never seen it molest them. As to the cruelty of caging up wild birds, it is more fanciful than real, a bird does not sing when it is unhappy, much may, however, be said as regards the cruelty of rearing birds from the nest; the parents' anger and annoyance is the least part of it, the bungling method of feeding the young, often upon the most unsuitable food, is its worst feature.

RED WING

The best staple food for this, and all other insectivorous birds, is composed of stale household bread crumbled, mixed with half the quantity of preserved yolk of egg, preserved ants' cocoons, and "Century Food," the mixture being moistened by the addition of potatoes, boiled the day before, and passed through a masher when required for use; on this mixture with the addition of a few insects, or worms, and a little fruit, I have kept Thrushes, and many other birds, in perfect health for years; grocers' currants, which are often recommended, should be avoided, they have a tendency to irritate the intestines and often produce diarrhœa; thin slices of apple, over-ripe pears, sweet-water grapes, sweet oranges, or ripe strawberries and currants, when in season, are as good as anything. In an aviary Thrushes and many other so-called "soft-billed" birds will swallow seed whole, and it seems to agree wonderfully well with them, rendering their flesh firm and their plumage glossy; but to feed a Thrush on bread and hempseed alone is the height of folly, and usually results in the early death of the captive.

This, like most of the British Thrushes, has been bred in aviaries and even in cages of about the size of an ordinary rabbit hutch.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE REDWING.

Turdus iliacus, LINN.

THIS, the smallest British Thrush, breeds from the Arctic circle throughout the Palæarctic region, and winters in Western and Southern Europe and Northern Africa; it visits the Volga islands when on migration. Westward it has straggled to the Canaries and Madeira. In Asia it has wintered in Persia, Turkestan and N W. India, and in Siberia as far as Lake Baikal.

Mr. Seebohm found it in the valley of the Petchora as far North as latitude 68°, he observes:—"The Redwing frequents the birch region and the upper zone of the pine region, occurring in limited numbers South of the Arctic circle in many places where these trees are found, in South Norway and Sweden, and on the Russian shores of the Baltic. It is the most northerly in its range of any of the Thrushes, and occasionally wanders as far as Greenland."

To the British Islands the Redwing is a regular winter visitant, arriving on our Eastern coasts either towards the end of October or early in November; it is supposed to linger longest in the Hebrides, the last examples probably leaving us during the month of April. The assertions which have, from time to time, been made, that this species has remained to breed in Great Britain, are not satisfactory, neither the birds or eggs having been secured as evidence of the fact.

The Redwing, when in breeding plumage, is, next to the Blackbird, the most strikingly coloured of our Thrushes; its upper surface is olive brown; a clear creamy white eye-brow stripe extends backwards to the nape; wing-coverts with pale tips; the under surface is buff, gradually fading off into almost pure white on the belly; the breast and throat broadly streaked with dark brown; the flanks and under wing-coverts chestnut red, spotted with deep brown. The sexes are very similar, the young, however, differ in having their upper and under surfaces spotted. In general appearance the Redwing is like a small Song Thrush, but its whitish eye-stripe and red flanks give it a very distinctive character; when seen from the front it has a curious resemblance to a frog.

Soon after their arrival in this country Redwings may sometimes be seen, even in our suburban gardens, feeding at twilight upon the berries of the hawthorn. I remember on one occasion, chancing to look out shortly before dusk at my garden, I was puzzled to see the entire length of a thick hawthorn hedge which closed in the end of my plot of ground covered with moving shadows. I ran for a field glass and discovered that no less than thirty Redwings were fluttering up and down like huge moths in front of this hedge, eagerly snatching off and swallowing the berries. The following day I discovered that an unusually fine crop of haws had almost entirely disappeared.*

Seebohm says that "The favourite haunt of the Redwing is a sheltered

*The birds were clearly distinguishable with the glass as Redwings, not Fieldfares, the latter arrived some weeks later and found hardly a berry left.

valley down which a little brooklet runs, with the trees scattered here and there and tall hedgerows of thorn and hazel. They are very partial to small parks thickly timbered and studded with clumps of white thorn trees, with here and there a cluster of hollies or a dense shrubbery, whither they repair at nightfall to roost."

In wooded districts the Redwing usually builds in bushes or low-growing trees, but in more desolate regions a low fence, a hollow between stones, or a sloping bank serve as a nesting-site. The nest itself is a neat structure formed of plaited twigs, grass and reindeer-moss, plastered inside with mud or clay, and lined with fine grasses and root-fibre. The number of eggs varies from four to six, some writers giving the former, and some the latter, as the usual number. In colour they are pale green, either finely and closely streaked with reddish brown, like small specimens of some Blackbird's eggs, or zoned with brown blotches; but, as with other Thrushes, eggs are sometimes found of a uniform green colour.

When the nest is approached, but especially when it contains young birds, the Redwing becomes much excited, flying angrily round the intruder and snapping its bill after the manner of its kind. It frequently produces two broods in a season.

The food of the Redwing consists preferably of insects, worms and snails, but when frost and snow deprive it of these it feeds on various berries, more particularly those of the service tree and hawthorn; it is distinctly more insectivorous in its tastes than other Thrushes, nevertheless in confinement it thrives well upon the same soft food.

One winter a bird-catcher brought me a bag, containing six Redwings and a Fieldfare which he had just caught. I would not, however, be persuaded to take the whole of them, but selecting two of the Redwings (which fortunately proved to be a pair) and the Fieldfare, I sent the man away. The Redwings I turned loose in an unheated aviary with other British birds. At first the new-comers were somewhat wild, but they soon settled down in their new home. They never showed the slightest uneasiness at the season of migration, as I had been informed they would do, but early in the year assumed such rich colouring, that Naturalists who saw them in my aviary, expressed astonishment at the beauty of their plumage. Very early the male began to record his song, but usually in the morning only; in the evening its call-note—a soft plaintive whistle, which reminded me of that of the American Blue-bird, was all that I heard at that time; later, however, he began to sing out loud.

As an aviary bird, I found the Redwing ornamental, and most inoffensive, but by no means lively; it would sit in one place on the earth without moving for half an hour at a time, still as a breathing statue—a frog in behaviour and appearance; but, throw a spider or a smooth-skinned caterpillar into the aviary, and, like that Batrachian, it was instantly alert. In spite of its beauty I should imagine that the Redwing, if kept in a cage, would be intolerable; after two years I wearied of my pair, and sold them for a small sum to a friend, who immediately entered them for a show and carried off a first prize with them. Poor Redwings! I fear that their life after they left my home was not an enviable one.

Although the breeding of the Redwing in Great Britain needs confirmation, there seems to be no reason why it should not be possible, inasmuch as it has been proved that stragglers have remained with us throughout the summer. It has been known to nest in the Faroes.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE FIELDFARE.

Turdus pilaris, LINN.

RESPECTING the Geographical distribution of this species, one cannot do better than quote Seebohm, he says:—"A regular winter visitant to the British Islands, the Fieldfare is commonly distributed over the cultivated districts, and as far on the uplands as the mountain farms extend. The arrival of Fieldfares in Scotland is usually noticed first in the eastern counties, as it is quite natural to expect it would be, for their path in autumn is south and south-westwards. A few birds are said to be found on the Orkneys throughout the year, but they do not breed there. On the Hebrides the Fieldfare

FIELDFARE ♂.

PLATE 4

does not arrive till mid-winter, and is only found on the farms and pastures —in the little oases of cultivated land so sparingly scattered amongst the wide-stretching moorland wastes. In Ireland these birds also arrive late, and are found commonly distributed over those districts suitable to their habits and needs—the cultivated tracts. Fieldfares have been said to have bred in the British Islands; but until definite proofs are forthcoming it is not safe to admit the truth of the statement, the birds being very liable to be confounded with Missel-Thrushes by careless observers. The Fieldfare has a somewhat more southerly breeding-range than the Redwing. It breeds in the Arctic circle, extending up to, and occasionally beyond, the limit of forest growth, and in north-temperate Europe as far South and West as the basin of the Baltic, and throughout Siberia as far East as the watershed of the Yenesay and the Lena. Its occurrence in Iceland is doubtful,* but it has been occasionally met with on the Faroes. It winters in Southern Europe, occurring very rarely in the Spanish peninsula, but crossing the Mediterranean to Morocco, Algeria, Egypt, and Nubia. In Asia it winters in Turkestan and Cashmere; and one specimen at least has been obtained at Simla, in the North-West Himalayas."

The Fieldfare in breeding plumage is slaty-grey on the upper parts with the exception of the mantle which is chestnut brown, and the wings and tail, which are dark brown; the head is streaked with black; the throat and breast are rich golden brown, spotted and streaked with blackish brown; the flanks are similar, but more orange internally; the centre of the belly is pure white and unspotted; the bill yellowish; feet black; iris deep brown. The female greatly resembles the male, but the young on leaving the nest are spotted with buff on the back, though after the first moult they much resemble their parents.

The Fieldfare's season of migration varies somewhat in accordance with the milder or colder temperature of its breeding-haunts; in like manner its time of departure from our shores depends greatly upon the appearance of spring weather; there is no defined appointed time for its migration. Cold and scarcity of food in its native home represent the voice of nature calling upon it to seek comfort in somewhat milder regions; then again, the return of warmth and living food remind it that the season of love is at hand, and the inherited habit of centuries teaches this bird to seek for the fulfilment of its hopes in the land of its birth; doubtless this is largely the cause of the so-called migratory instinct in all birds, the weaker and more sensitive to cold and hunger being the first to migrate; therefore it is that the Redwing precedes the Fieldfare.

It is easy to distinguish a Fieldfare from a Missel Thrush when it is on the

*There seems, however, to be very little question that this species is an occasional Icelandic visitant.—A.G.B.

ground, for, although it frequently associates with the latter bird, its grey rump, thrown into strong relief by the dark wings and tail, looks almost white. This species, however, is far less frequently seen upon the earth than our native Thrushes. Its favourite resort is a berry-laden hawthorn, upon which it will eat its fill unless disturbed, when with a clatter of *chacks* and *chicks* it shoots off in a straight line towards another of nature's restaurants.

Among the birches and pines of Norway the Fieldfares breed in colonies, in the former the nests are said to be situated in a cleft between the trunk and a large branch, but further north these birds become less gregarious, and their nests are then situated in low bushes, heaps of firewood, on fences and similar places, after the fashion of our Blackbird; whilst on the bare tundras of Siberia they select a hollow under the grassy edge of a cliff or bank for a breeding-site, like the Ring-Ouzel.

The nest is very like that of the Blackbird, externally it is constructed of coarse dry grass, sometimes interwoven with birch twigs and a little moss, plastered inside with mud, and thickly lined with fine grass. The number of eggs varies from three to seven, but usually from four to six; according to Seebohm, they vary more than those of any of our British Thrushes; but I think most of those which I have seen could be matched among the almost endless variations of our Blackbirds' eggs; their ground-colour is either paler or deeper green, blotched, mottled, and speckled with reddish brown, sometimes over the entire surface, but more frequently concentrated at the larger end. The markings of some examples (as with our Blackbird) are indistinct, evenly distributed, in others they are few and rich brown upon a deep blue ground (a variety which I have not seen in eggs of the Blackbird; though they are sometimes as blue as those of the Song Thrush).

The food of this species consists in summer of worms, insects, as well as their larvæ and pupæ and small wild fruits; in winter, principally of berries, especially those of the hawthorn, also insects, snails and worms when procurable, and seeds of grain and grasses.

The Fieldfare is a poor songster. He rarely sings excepting in the breeding season, and his performance consists of a wild warble, at times interrupted by chattering somewhat similar to that of the Starling. The example which I had for two years never sang at all, but occasionally uttered a harsh guttural sound like that of the Missel Thrush.

As a cage bird the Fieldfare is most uninteresting, he soon becomes tame, and if allowed to bathe, keeps his plumage in beautiful condition; but, excepting for show purposes, is only an expense: like all Thrushes, he is a large eater, and

WHITE'S THRUSH

PLATE I

therefore needs frequent attention. I parted with mine when I sold my Redwings, and have never wished to keep another.

I fed him on the same food as my other insectivorous species, adding a few worms, snails, caterpillars, and berries when obtainable; he was always in perfect health, even when moulting, and never showed restlessness at the seasons of migration; in fact, he was one of the steadiest and most apathetic birds I ever possessed.

His name has been corrupted to "Felfer," "Felt," "Pigeon Felt," or "Blue Felt" by country folk.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

WHITE'S THRUSH.

Turdus varius, PALLAS.

THIS bird, also known as "White's Ground-Thrush" and placed in the genus *Geocichla*, is only an accidental straggler to our shores; about a dozen examples having been obtained in the southern and midland counties of England and two in Ireland. Therefore, although, from the writer's standpoint, it has no more claim to be called British, than any foreigner stranded on the British coast has to be called an Englishman, its claim to the title is stronger than in the case of the "Black-Throated," the "Rock Thrush," and many other species usually included in the British list on the strength of single examples which have come to hand.

White's Ground-Thrush is a native of South-central and South-eastern Siberia and of North China: at the approach of winter it migrates to South Japan, South China, the Philippines and even to Sumatra. The first example obtained in Great Britain was shot in Hampshire in January, 1828; and, being supposed to be new to

science, was named *Turdus whitei* by Eyton, in honour of White, of Selbourne: thus the trivial name of White's Thrush was first applied to it.

The upper surface of this species is ochraceous brown, with black tips to the feathers; the wing feathers are darker and tipped with buff; the tail has *fourteen* feathers, the four central ones ochraceous brown, the others dark brown, all tipped with white; the under surface is white, tinged with buff on the breast, and boldly spotted with black crescent-shaped markings: the bill is brown, the lower mandible paler; the feet yellowish brown, the iris dark brown. The sexes are supposed to be alike. In size, this species rather excels the Missel-Thrush.

The nidification of White's Thrush was observed in 1872, at Ningpo, by the late Consul Swinhoe: the nest was roughly built, and situated on a fork of a horizontal pine-branch; its outside consisted of dead rushes, grasses, a few twigs, dead leaves and a little moss; it was thickly plastered with mud, amongst which were fragments of some green weed; the inside, like that of the Blackbird, was thickly lined with mud, covered with an inner lining of coarse rootlets and sedgy grass.

Three eggs only were in the nest; but the complete clutch would probably number four or five; Mr. Seebohm, who secured the nest and two of the eggs for his collection, thus describes them:—"They resemble those of the Missel-Thrush; but the ground-colour is slightly paler, and the spots much finer, more numerous, and more evenly distributed."

The flight of White's Thrush, unlike that of our common species, is said to be "very undulating, like that of the Green Woodpecker, and low, often settling on the ground, and only making choice of a tree when it happened to pass under one, into which it rose almost vertically." It is more strictly insectivorous than the true species of *Turdus*, living principally upon insects, their larvæ and pupæ, spiders, worms, and such mollusca as are found in moist situations. In China it is known to feed also on berries, especially those of the banyan; nevertheless most of its food is obtained on the ground amongst decayed vegetation, in ditches, under bushes, or among the roots of trees.

It is not known whether this species has any song; its call-note is said to be "a soft plaintive *see*, audible at a long distance," and when on migration it sometimes "utters a melodious whistling cry."

As a cage-bird, White's Thrush would probably prove an utter failure; whether it sings or not, it can hardly be an industrious performer, moreover it would probably pass much of its time on the floor of its cage or aviary.

BLACKBIRD

PLATE

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE BLACKBIRD.

Turdus merula, LINN.

THIS handsome Thrush is generally distributed over nearly every country of Europe and North Africa. In Norway at about 67° N. lat. it appears to reach its highest breeding range; it also occurs in Asia Minor, Palestine, Persia, Turkestan, Afghanistan and Cashmere, being somewhat larger in the three last mentioned countries, and, on that account distinguished by Mr. Seebohm as a race to which he has given the name of *Merula maxima*. In Great Britain it is generally distributed and partially resident, but in the Shetland Islands it occurs only in the winter; and, in the Hebrides its appearance is irregular, although on some of them it is recognized as a rare resident. In the southern counties in winter its numbers are largely increased by immigrants from the north.

The adult male is entirely glossy black in plumage; the bill in young birds golden ochreous, gradually becoming deep orange with age, feet brownish black, iris hazel, edges of eyelids golden yellow. The adult female, when young, is deep brown; somewhat rufous on the throat and breast, which are streaked with smoky black; the bill brown and considerably broader and shorter than in the male; as the bird grows older, the gape becomes more or less edged with ochre yellow, the black throat-streaks become more pronounced and the chin sometimes becomes whitish. In the nestling birds most of the feathers have pale shaft-streaks, and those of the upper parts have dark tips; whilst those of the under parts have dark bars; in other respects they resemble young hen birds: young males are said to be slightly more dusky than females; but if such a difference exists, I never could satisfy myself of the fact in the case of the young birds which, from time to time, I have hand-reared: the more active and pugnacious disposition and narrower crown would be far better guides in the selection of cock nestlings.

Talking of pugnacity, it is pre-eminently a characteristic of the Blackbird, and especially at the pairing season: the Song-Thrush is combative enough, but the Blackbird will fight to the bitter end. I remember, on one occasion when in my garden, hearing a violent rustling and flapping of wings and supposing that

some unfortunate Thrush or Blackbird had been seized by a cat, I slipped up as quickly and quitely as possible to the scene of the disturbance; there I saw two cock Blackbirds firmly clutching one another and tearing out feathers by the mouthful, violently flapping the while and so intent upon murder that, until I was almost within reach of them, they were not aware of my approach; then just as I was meditating a double capture, they saw me, and simultaneously letting go of one another, flew off in opposite directions with loud chattering cries.

Fighting is not the only sin of which the Blackbird is guilty; some individuals of the species have *ovivorous* tendencies: at a house where I was once staying, a pair of Blackbirds had built a nest on a trained plum-tree; as usual I had interested myself in noting the time occupied in building and in the deposition of the eggs: on the third day the nest was completed and the hen settled down in it for the night. I rose early in those days, frequently taking a country ramble before breakfast; that morning, before starting, I looked in the nest, and there was the first egg; but, when I returned an hour later, the shell alone lay on the earth below the nest. Determined to discover the thief, if possible, I took a pair of opera-glasses upstairs that night, and, getting out of bed about 6 a.m., I waited and watched: presently I heard the cock Blackbird singing, and then he flew on to the end wall of the garden—"*Chink, chinka chuck, chuck chuck, chack; swee; swee.*" Out flew the hen and on to the nest went the old wretch, deliberately pecked and picked up the egg, and devoured the contents, dropping the shell as before. This trick was repeated again the following day, and then the hen deserted her nest.

In all well-wooded districts the Blackbird is extremely abundant, and where wood and water are combined it is so common that, on one occasion, I came across nearly forty nests in the course of a single morning's ramble. In suburban gardens it is also common, but not nearly so much so as the Song-Thrush: this can be easily proved, not merely by the numbers seen, for with so skulking a bird many might be overlooked; but, by the relative number of nests built in such places in spring, and the largely disproportionate number of Thrushes trapped in winter.

The nest of the Blackbird is built in the most diverse situations, such as hedges, shrubs, trees, faggot-stacks, holes in walls or rocks, niches in sides of gravel or chalk-pits, or even in very low banks; its favourite sites are perhaps in whattle fences overgrown with bramble or ivy, in evergreen shrubs, or on branches of fruit-trees trained against walls. It is a bulky cup-shaped structure, usually placed upon a foundation of twigs, dead leaves, rags, paper, sometimes a draggled quill feather or two, and mud; the form of the outside walls varies

according to the position of the nest; this is constructed of stalks of grass and twigs intertwined and compacted with moss; the inside of the cup plastered with mud in pellets, almost or entirely concealed by dead leaves, rootlets and fine grass; occasionally the mud plastering is entirely absent, but the only two nests having this peculiarity which I have seen, I met with on the same morning; one of these I retained for my collection.

The eggs are marvellously variable, both in size, shape, and colouring,; they number from four to six, but usually five. The following are some of the more distinct varieties which I have taken:—1, Greenish blue, precisely like some eggs of the Song-Thrush in tint; but when examined through a lens, showing very minute and indistinct reddish longitudinal dashes over the whole surface. 2, Greyish olive, showing (under a lens) extremely fine dust-like brownish speckling, a few black dots near the small end, this form somewhat reminds one of some eggs of the Jay. 3. Large and broad, pale chalky blue, with indistinct rusty spots and dots scattered sparsely over the entire surface, the larger half sprinkled with little rugosities. 4. Much elongated, pale blue, mottled all over with pale rusty reddish. 5. Short and broad, greenish blue, mottled and blotched all over with reddish-brown. 6. Very broad; pale chalky blue, speckled sparsely all over, and heavily blotched at both ends, with rust-reddish and greyish lavender. 7. Similar, from same nest, but only heavily blotched at the larger end. 8. Pale sandy brownish with very indistinct rust-reddish marbling all over: this is a small egg, evidently laid by a young bird. 9. Pale greenish blue sparsely but boldly spotted from the shoulder (or larger terminal third) and heavily spotted and clouded at the larger end with rusty brown leopard-like markings. 10. Pale greenish, so covered with indistinct reddish smears and speckles that the green is almost lost. 11. Deep blue-green, boldly spotted with rusty brown, which collects into a large patch at the small end. 12. Flesh-whitish, densely speckled and marbled with rust red. 13. I also have a chalky white egg, with faint indications (visible through a lens) of olivaceous mottling. This egg was given to me by a lady friend and was obtained by her from an ordinary nest, at Wateringbury, near Maidstone. Of the above (which I have selected for description from a picked series of forty-four in my egg-collection) Nos. 1, 2, 3, 8, 12, and 13 are all rare varieties, not very characteristic of the species: possibly No. 1, which is not unlike a very deep-coloured Starling's egg, may, as Howard Saunders suggests, be the result of a union between the Song-Thrush and Blackbird, the fact that these two species do sometimes interbreed in a wild state being thoroughly well established; but if so, it would be laid by a hybrid hen, for it is not likely that union with another species would affect the eggs laid by a pure-bred bird.

In the winter of 1894-5 a bird was caught in one of my traps which I firmly believe was a hybrid Thrush-Blackbird: when first captured it was very dirty, and I then supposed it to be an old hen Blackbird; but, after a good wash, its true colouring came out clearly; the whole upper parts being deep smoky brown, the chin and throat white streaked with dull black; the breast, in certain lights, showing traces of the true Song-Thrush spotting; the bill deep orange with the basal half of the culmen black; feet yellowish horn-brown.

This bird, of which Mr. Frohawk made a careful sketch, became very tame in a few weeks and I should certainly have kept it up to the present time, had not a friend, who had given much attention to British cage-birds, visited me and asked me why I was keeping a hen Blackbird. I pointed out the orange bill, the extent of white on the throat, the heavy black streaking and ill-defined breast spots, and he admitted that he had never seen a similar hen Blackbird. Unfortunately I wanted the cage, in which I had kept this supposed hybrid, for my Mocking-bird (which I found too tyrannical for an aviary) therefore I gave the Thrush its liberty: but, on the following day, one of my neighbours was walking round my garden, when a bird in an adjoining plot began to sing a most marvellous song, which my neighbour characterized as neither like that of Blackbird or Song Thrush, but a combination of both. I have no doubt, as I told him, that my recently liberated bird was the singer.

The song of the Blackbird is quite unlike that of any other British Thrush, clear, mellow and melodious, it is one of the finest productions of our feathered choir: it however varies wonderfully in merit in different individuals, and no two Blackbirds sing precisely alike. The finest singers are rarely heard, their performance is continuous, flowing, ever changing, somewhat reminding one of the Blackcap's song; most Blackbirds, however, sing set phrases, more or less plaintive but always vigorous in character.

Frequently, in the middle of its song, a Blackbird stops abruptly and ridicules its own performances, singing over the last phrase in a minor key and following it up with derisive caricatures ending in meaningless squeaks: sometimes it pauses abruptly and (perhaps for five or ten minutes) repeats, at intervals its dismal ear-splitting call note—a shrill reedy *tseet;* or it will break off

into its noisy go-to-roost rattle—"*Chink, chink, chink, chink, chink; chacka, chack-a-rack, chack, chack, chack, chack; chuck, chuck, chuck.*" Passing through shrubberies at twilight, this good-night greeting may be heard on all sides; sometimes a little varied, but usually commencing with "*chink*" and terminating with "*chuck*": at dawn it frequently leaves out the harsh "*chack.*"

The flight of the Blackbird is usually very direct, it may be seen passing over garden after garden with steady regular beat of wing, until perchance it nears some favourite tree, when its course is almost imperceptibly changed to an upward slant which lands it on its chosen branch; when suddenly flushed from the nest, the flight is usually direct at first, but with a rapid swerving to right or left and a return to roost in some neighbouring cover. When it alights, the Blackbird throws its tail up almost at right angles to the body, stretches the neck and holds its legs wide apart; this gives it a wonderfully alert and attentive aspect. In this respect it somewhat resembles Magpies, or Jays of the genus *Cyanocorax*, which always throw up the tail when they alight, but assume the attitude of attention as this appendage drops back to its ordinary level.

Although usually a very skulking bird, seeking its food mostly under hedge-rows, in ditches, or among shrubs and bushes; when it has young to feed the Blackbird may often be seen among Starlings and Thrushes upon our lawns, busily engaged in the pursuit of worms. In fields of turnip or cabbage it may also be seen seeking for worms and caterpillars; for the common garden snail and slugs the Blackbird seems to care less than does the Song-Thrush, but the prettily banded hedge-snails it delights in: like all insectivorous birds, its favourite morsels are spiders, insects and their grubs. Mr. Frohawk tells me that, in the late autumn, he has watched a Blackbird slowly hopping down a garden path and carefully turning over every fallen leaf in its search for insect food. Unfortunately for the Blackbird's peace of mind, it is not exclusively insectivorous; it is also to some extent graminivorous and largely frugivorous, being especially fond of strawberries, in pursuit of which it often loses its life at the hands of the short-sighted fruit-grower; it also devours a good many currants, gooseberries, cherries, and peas in their season, whilst the raspberry, blackberry and sloe are not despised. Late in autumn when the more pleasant fruits are becoming scarce, the Blackbird turns its attention to hips and haws, as well as the berries of the ivy and mistletoe.

Upon the earth the Blackbird proceeds by a series of hops, then a pause at attention and on again: in its actions it strongly reminds one of the Robin; but it does not appear, like our little Christmas favourite, to suffer from chronic epilepsy, fidgets, St. Vitus's dance, or whatever it is which makes the latter give

that absurd little duck every half minute, when sitting on a branch: no, the Blackbird is far too sedate for such frivolity.

The Blackbird is especially bold in defence of its young; even when the nest contains eggs alone, I have known this bird to sit so close, that it has been caught upon the nest and ruthlessly killed by its heartless captor. To some creatures having the outward form of man, a few cherries, hastily swallowed and forgotten, are of more importance than months of woodland music: unhappily, many such mere animals are trusted with firearms, and do their utmost to destroy the farmer's and fruit grower's most useful and industrious assistants; either not knowing or not caring to know, that the birds are only taking wages in kind for the fruit which they have worked hard to save from the ravages of insect enemies.

As a cage-bird, the Blackbird is without a rival among our Thrushes; clean, lively, pleasing both in form and in his simple colouring, readily tamed, easily kept in health for years, it is no wonder that he is a general favourite: but, if he is to turn out a good songster, he must be caught, not reared from the nest. A hand-reared bird never sings the wild song, and hardly ever pleases with his performance; indeed I have only known one bird (reported to be hand-reared, and fed upon sopped bread only) which really had an attractive song. Of the numbers which I reared when I first began to study aviculture, the best singer never got beyond six notes of a dismal psalm-tune. On the other hand, every trapped cock Blackbird, if properly fed, is sure to sing the true wild song sooner or later; usually in the first spring after his capture. Hand-reared birds should be taught by trapped wild birds.

Like many other birds when first caught, the Blackbird often refuses to feed at all the first day; and, if in good condition when caged, he may continue to sulk for a day or two longer; but even a sulky Blackbird cannot resist the attractions of a lively mealworm, spider, or even earthworm, and when he once begins to eat, he will continue; so that there is never much difficulty in inducing him to empty his pan of soft food. The latter, as already hinted previously, should be largely farinaceous, but with an admixture of yolk of egg and ants' cocoons; slices of apple or pear, and berries, as well as insects and worms, should also be given from time to time; but meat *never* excepting as a purgative, if you value the health of your bird: if given, it will assuredly produce diarrhœa, resulting sooner or later in cramp, or fits. I tried it with fatal results, for several years.

In 1905 and 1906 I bred hybrids between the female of this species and the male of the Himalayan Grey-winged Ouzel *(Turdus (Merula) boulboul)*; the males sooty black, with a red-brown wing-patch, the females variable, either almost wholly olivaceous brown or else nearly resembling the female of the Indian bird.

RING OUZEL

PLATE

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE RING-OUZEL.

Turdus torquatus, LINN.

UPON the Continent of Europe this bird is a summer visitant to the more desolate portions of the pine districts; it nevertheless breeds freely in the mountainous regions of the South. Eastward its range appears to be limited by the Ural Mountains. It winters in the lowlands and alpine districts of South Europe, in North Africa, Asia Minor, and Persia.

In Great Britain it is rarely resident; indeed during the winter it is usually the only British Thrush which is absent. Though in mild seasons it has been known to remain with us up to Christmas, as a rule the Ring-Ouzel leaves us in September or October, returning in April to breed. Although far more abundant as a breeding species in the wild moors and mountainous districts of the North, it is known to have bred in rocky parts of Cornwall, Devon, Somerset, Hampshire, Kent, Suffolk, Norfolk, Warwick, Leicester, Gloucestershire, Monmouthshire, Wales, Herefordshire, Shropshire, Staffordshire, Derbyshire: in the wilder portions of Cornwall, Devon, Somerset and Wales it breeds freely.

The general colour of the male Ring-Ouzel is a dark sooty brown inclining to black, with the exception of a broad white crescentic gorget; the wing feathers edged externally with grey; under wing-coverts and axillaries mottled with grey and white: bill yellowish, black at the tip; feet brownish black; iris dark brown. The female paler and browner than the male and with somewhat brownish gorget. Birds of the year have broad pale margins to the feathers of the under surface, the gorget in the male is brownish and in the female barely discernible. Nestlings have the feathers of the back and breast barred with black and pale brown, and the wing-coverts tipped with ochraceous buff.

The nest of this species is not at all unlike that of the Blackbird, but it is somewhat looser in construction: externally it is formed of dry bents and grass, frequently intertwined with twigs of heather or larch and compacted with dead leaves, moss and mud; inside it is lined with clay or mud, concealed by a thick inner lining of fine grass. It is almost always built on the ground, most

frequently amongst ling on the sharp edge of an embankment; also under furze, or among heather upon steep declivities, very rarely in a low bush or tree.

The eggs number from four to five, usually four, and are extremely similar to those of the Blackbird and Fieldfare; indeed, unless the collector takes them himself, I do not for a moment believe that he could be assured of their origin. I obtained eggs from two nests in Kent, in both cases flushing the bird from them; she flew off with harsh cries—"*chack-chack-chack*"* after the manner of a Blackbird, but did not go far away; probably had the nest contained young she would have flown round my head with loud cries after the manner of the Missel Thrush; but I have rarely found birds so devoted to their eggs as to their young, unless they have actually commenced incubation. I found my second nest amongst a clump of heather growing under a furze bush, on the edge of a wild plantation bounding part of a large park at Tunstall, near Sittingbourne, on May 17th, 1879: the nest unfortunately only contained one egg. My first nest was found on the margin of an unreclaimed bit of heathery moorland in the Stockbury Valley under a straggling tuft of ling overhanging the edge of a steep embankment at the side of a little frequented road, on May 24th, 1875; this nest contained two eggs. In both cases I omitted to take the nest, and consequently this is a desideratum to my collection; probably the birds continued to utilize them.

The habits of the Ring-Ouzel are very similar to those of the Blackbird; its flight is very similar and its trick of throwing up the tail as it alights, its method of searching for food, characterized by a shy, alert, almost nervous manner, and its harsh cry uttered when the safety of its nest is threatened and at roosting time. Even its song bears some similarity to that of its ebony relative though harsher in character and in some respects more nearly approaching that of the Song Thrush; its habit of interrupting and criticizing its own performance is also eminently characteristic of the Blackbird: its call-note is a thin piercing whistle, like that of our other Thrushes. The harsh *gurrrh*, characteristic of the Missel and Song Thrushes, can hardly be the true call note, since they certainly call to one another in the still more unpleasant whistled note above mentioned.

The food of the Ring-Ouzel consists of worms, slugs, snails, insects and their grubs, many kinds of berries, small fruits such as currants, gooseberries, blackberries, cherries, grapes and also plums.

Seebohm says:—"A true bird of the wilderness, it prefers the deepest solitudes that our land affords. Truly, indeed, the Ring-Ouzel's home is a wild

*This sound is usually rendered by the word *tak*: but there is a thickness about the initial letter better represented by *ch*: the almost metallic flint splitting sound which I render *chink*, in the account of the Blackbird, has been incorrectly written as "*pink*": a Blackbird is as likely to say "*purple*" as "*pink*."

and romantic one. You will first make his acquaintance where the heath begins, where the silver birch trees are scattered amongst the rock fragments, and the gorse bushes and stunted thorn and bracken are the last signs of more lowland vegetation. The scenery gets wilder, but still the bird is your companion; he flits from rock to rock before you, or, by making long detours, returns to the place whence you flushed him, uttering his loud, harsh, and discordant call-notes. The hills of Derbyshire are one of his favourite haunts; almost on the very summit of Kinder Scout, the highest peak of the High Peak, nearly two thousand feet above the sea level, the Ring-Ouzels rear their young."

I cannot speak personally as to the Ring-Ouzel's suitability for cage life; so far as I have been able to judge, from the specimens occasionally exhibited at bird shows, it appears to be as easily tamed as our other Thrushes; but it is possible that these specimens may have been hand-reared birds I certainly never heard one of them attempt to sing. There are several reasons for this dumb behaviour in captive birds; some that will not sing at all in a cage, warble splendidly in an aviary; then, insufficiently nourishing, or unnatural food may be the cause, the first from its lowering effect and the second by making the prisoner feel positively ill. Birds which are accustomed, when wild, to feed almost entirely on insects and fruit, are provided at our shows with a mess of finely grated raw beef and bread crumbs; on such hopelessly unnatural diet, it is no marvel, not merely that they feel disinclined to sing, but if they die before their term of punishment is completed.

With the Ring-Ouzel, in the writer's opinion, the true British "Thrushes," so called, should terminate. Other species recorded as belonging to our fauna, in works upon the birds of Great Britain, are:—

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE BLACK THROATED THRUSH.

Turdus atrigularis, TEMM.

INTRODUCED, because one young male was shot near Lewes in 1868.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE ROCK THRUSH.

Monticola saxatilis. LINN.

ADMITTED, because one specimen was shot at Therfield, Herts., in 1843. So far as I can see, there is no more reason for admitting these birds to our list than for excluding the following:—

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE AMERICAN ROBIN.

Turdus migratorius, LINN.

OBTAINED at Dover; but excluded, on the ground that it may have escaped from captivity. In these days of aviculture, even the rarest and least suspected birds may have reached our shores in this manner.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE SIBERIAN GROUND THRUSH.

Turdus sibiricus, PALL.

SOME writers admit, and others exclude this species; one example only having been obtained (on the authority of a dealer) between Guildford and Godalming, in the winter of 1860-61.

Dr. H. O. Forbes says that he on several occasions, during the terrible frost of 1894-5, saw two of these birds in his garden at Liverpool, feeding in company with Starlings, Sparrows, Thrushes, and Blackbirds: he was quite close, and able to identify them with certainty; he even made an unsuccessful attempt to catch them.

In other branches of Zoology, we should not necessarily regard a species as British, on the score of one or two examples having been obtained on our shores: the fact of their occurrence would be recorded, and possibly an illustration published, but subsequent works would not be considered incomplete which did not describe them as British.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE WHEATEAR.

Saxicola œnanthe, LINN.

ALTHOUGH Howard Saunders associates the Wheatears with the "Bush-chats," he points out the fact that they differ in their longer tails and white rumps, and states also Dr. Sharpe's belief that the members of the genus *Pratincola* are Flycatchers *(Muscicapidæ)*: the habits and actions of *Saxicola* and *Pratincola* are certainly not exactly similar, although a general likeness in the distribution of colours on the head, gives one the impression of relationship between them.

The Wheatear is a very remarkable bird in appearance, its head appearing to be far too large for its body: in stuffed specimens its whole character is invariably lost by the taxidermist, who produces an indentation, where none exists in life, just at the back of the skull: illustrations also, being mostly taken from prepared skins, do not usually do justice to the bull-headed Robin-like aspect of the living bird.

Occurring all over the Western Palæarctic Region from Greenland to Africa, and eastward through Siberia to North China, the Wheatear is also found in Eastern N. America and Behring's Straits; it is common, though local, throughout Great Britain, arriving early in March and departing in September; but its numbers increase as one travels northward, comparatively few pairs breeding in the southern counties. In winter it occurs both in North and West Africa, whilst Asiatic examples migrate to Mongolia, N. India and Persia, and American birds travel as far as the Bermudas.

The male Wheatear in breeding plumage has the upper parts grey, the wings dark brown and black, the rump white, the two central tail-feathers black to near base, the others white, broadly tipped with black; forehead and superciliary streak white; lores and ear-coverts black; under surface of body pale buff, slightly deeper on throat and breast; but in old birds almost white, with throat and breast buff; under wing-coverts and axillaries mottled with dark grey and white; bill black, feet black, iris dark brown.

The female is buffish brown, darker above, the ear-coverts dark brown instead

of black. In autumn, owing to the broad pale buff borders to the new feathers, the male nearly resembles the female; but during the winter these borders seem to be partly lost and the colour (as with that in the plumage of many other birds) grows in the feathers themselves without a further moult.*

Young birds are spotted above and below, the feathers of the wings and tail being also edged and tipped with buff.

The name Wheatear is derived from the words *white* and the Anglo-Saxon *ærs* (rump); I believe the bird is still called "*Whitus*" by the peasantry in some parts of England; it is also known by the names of "*Stone Clatter*" and "*Clacharan*" (Little mason.)

In Kent I have seen this bird but once, and then only on a wild neglected piece of grass-land close to a cultivated watercress stream; in the side of a bank overhanging this stream was a hollow, probably the end of a mole burrow, which had been cut across to lengthen the bed of the stream; and in this hollow was the Wheatear's nest; unfortunately she had not commenced to lay. In the same place a lady friend obtained eggs of this species the year before.

In June, 1886, I saw a considerable number of Wheatears: they were flying about the broken cliffs between Yarmouth and Caister, where sand and patches of reedy grass are commingled over irregular slopes and hollows; an expanse desolate indeed in appearance, but the home of numerous rabbits, whose burrows in every direction form traps for the heedless pedestrian. I looked in many a hole for nests, but my search was not rewarded. I thought of, and put into practice, the advice given in the following extract from Yarrell, 4th edition, to no purpose.

"When the nest is in a rabbit-burrow it is not unfrequently visible from the exterior, but when under a rock it is often placed a long way from the entrance, and out of sight. It can nearly always be found with certainty, by watching the hen-bird, and Salmon says that on the large warrens of Suffolk and Norfolk its position is easily detected by the considerable number of small pieces of the withered stalks of the brake amassed at the entrance of the burrow. When the place of concealment, however, is beneath a rock or earth-fast stone, the nest is often inaccessible to the finder."

In addition to its favourite rabbit-burrow, the Wheatear utilizes heaps of stones, niches in walls, peat-stacks or banks; or even hollows partly sheltered by a large clod or stone, as building sites. The nest is a rather large and flattish structure, loosely formed of very fine dried grass, sometimes rootlets and a little

* In the case of the Indigo Bunting of N. America, the change from brown winter plumage to the bright blue and green of the breeding dress, is chiefly due to a gradual growth of the bright colouring in the feathers, comparatively few feathers being shed: I have the skin of a bird which died half through its spring change, showing the feathers in their transitional stage.

moss, and lined with feathers and hair, or hair alone. The eggs are said to vary from four to eight in number, six being the usual clutch; they are somewhat elongated, pale greenish blue, and (almost invariably) unspotted, but very rarely there are a few very indistinct purplish dots at the larger end.

The Wheatear is largely insectivorous, capturing much of its food on the wing after the manner of the Flycatchers. It also eats larvæ of various insects, spiders, small worms and molluscs, but in the autumn it also eats the wild moorland fruits: it is a pretty sight to watch this bird perched upon a wall, its tail swaying up and down like that of a Wagtail: presently you see it jerk its head upwards and off it darts with graceful fluttering flight after some passing beetle or fly, which it captures without difficulty. If you creep up to watch more closely, it waits until perhaps only a few yards intervene between you and it, then away it flits, somewhat after the fashion of a Wagtail, to some more distant rock. When searching for the nest in Norfolk and hoping that the bird would reveal its proximity by returning, after a short journey in one direction, to some previously occupied rock, we found that it still flew before us from rock to rock; it became evident that our fruitless search could only be explained by the fact that we were too late upon the scene.

The Wheatear first arrives in the south of England towards the end of March, the males reaching our shores a little earlier than the females, but they usually begin to build about the middle of April and the nest may be found from this time to about the middle of May, but although the species is double-brooded, the June nests seem less easy to discover, possibly they may be more carefully concealed, or the increased power of the sun makes stooping more irksome to the searcher. In August and September numbers congregate together, in preparation for their migration to the south; at this season many are snared by the shepherds on the Sussex Downs and destroyed for food; by the beginning of October most of the survivors have left the country.

The song of this bird is a short, but not unpleasant warbling, but its call notes are less musical, resembling the sharp *chink*, *chack*, *chack* produced by the concussion of a flint and steel.

In confinement the Wheatear or "Clod," as the London birdcatchers call it, soon gains confidence in the goodwill of its owner and flies up to the wires to take flies or mealworms from his fingers; it is a peaceful law-abiding subject; but when some favourite morsel has been snatched from under its very bill, it sometimes shows its annoyance by the sharp click of its mandibles, characteristic of most insectivorous birds. The first Wheatear I ever possessed was brought to me one evening by a small bird-dealer, who informed me that it had been caught

that afternoon and that, if I did not care to give ninepence for it, he meant to kill and stuff it for one of his customers. Of course I bought it, turned it into a large flight cage in my study and hoped to reconcile it to captivity. Unlike many birds when newly caught, this Wheatear appeared to be quite at home at once, but I could not succeed in inducing it to eat anything but mealworms and house-flies; berries it would not look at, and soft food it regarded with utter contempt; in three days it died.

A second specimen was brought to me, about nine years later, by a friend who had already kept it for about a week, in a room with other British Birds. I turned it out with Wagtails and other birds in a large unheated aviary; it took kindly to the soft food from the first, and ate a good many cockroaches daily; passed through the winter without mishap, came into full breeding plumage and commenced to sing in the spring: sometimes, but rarely, it sang on the wing; it usually preferred to sit close to a wide casement, which is kept open during the mild weather, and warble at intervals. When a fly passed into the aviary, it had little chance of escaping; the Wheatear, a Redstart and a Grey Wagtail were all after it at once, and the Redstart was generally the winner; the Wheatear coming in second, and the Wagtail rarely getting a chance, in spite of its marvellous aerial acrobatic powers. Unfortunately this bird did not live many months; before I had kept it a year it died suddenly; although the day previously, it had appeared to be in excellent health.

Other species of Wheatears have been admitted into the British list, but their claim to this position is based upon the chance occurrence of one or two examples in this country. Whilst denying that this gives them a title to the name of Britisher, it may perhaps be as well to record their names:—

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE ISABELLINE WHEATEAR.

Saxicola isabellina, Rüpp

ADMITTED to be an English bird on the ground that a single female example was shot at Allonby, in Cumberland, on the 11th November, 1887.

WHINCHAT

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE BLACK THROATED WHEATEAR.

Saxicola stapazina, VIEILL.

A SINGLE male specimen was shot near Bury, in Lancashire, about the 8th May, 1875; it belonged to the Eastern race of the species.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE DESERT WHEATEAR.

Saxicola deserti, RÜPP.

A MALE was shot near Alloa in Clackmannanshire, on the 26th November, 1880, a female on the Holderness coast, Yorkshire, on the 17th October, 1885, and a second near Arbroath on the 28th December, 1887.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE WHINCHAT.

Pratincola Rubetra, LINN.

BREEDS in suitable localities throughout Northern and Central Europe, its eastern boundary in European Russia being probably the Ural Mountains; it winters in Southern Europe and Northern Africa, extending its range westward to Fantee and eastward to Abyssinia. It also occurs in Arabia, Asia Minor and Northern India: but in the Indian examples the relative length of the primaries is said to differ, and the birds themselves are larger than ours. In Great Britain the Whinchat is pretty generally distributed; being abundant

in certain localities, but absent from many districts of Scotland, and somewhat local in Ireland.

The Whinchat above is blackish brown, the feathers edged with sandy buff, slightly redder on the upper tail-coverts; wings dark brown, smaller coverts white; two central tail-feathers dark brown, white at base; other tail-feathers with the basal half white and the terminal half dark brown, with buff margins; a clear white superciliary streak; lores, ear-coverts and cheeks dark brown; chin white, continuous with a streak bounding the lower part of the cheek and sides of neck, throat and breast reddish fawn colour, shading into buff towards centre of belly; under tail-coverts also buff; bill and feet black; iris brown.

This bird is most commonly seen on broad open commons, heathery mountain slopes, pastures (whence its local name of "Grass-chat,") meadows and wild briar-clad wastes; it haunts both mountain and valley, hill and dale, and wherever vast tracks of furze-covered land exist, it may be confidently looked for; to this it owes its common nickname of "Fuz-chat," the only title I believe, by which the London birdcatchers recognize it. In some districts it is also known by the name "Utick" on account of its call note *u-tic*, *u-tac* or *u-chack*.

I first met with the Whinchat in fair numbers, about the middle of May, amongst the gorse bushes covering a wide expanse not far from Detling, on the road from Sittingbourne to Maidstone. The birds were dotted about here and there on the topmost sprays of the gorse, whence every half minute or so they darted off after some insect, returning almost invariably to the same perch. Every few minutes one of them would flit off, warbling softly, to some distant bush, under which it would dive; but when I imagined that its nest was there concealed, and walking straight to that point, began carefully to seek for it, I invariably found that there not only was no trace of a nest, either in or under the bush, but that the mischievous bird had simply passed through an opening and onwards, perchance in some new direction with the distinct purpose of misleading me, or else had sought some fresh article of diet below the shelter of that prickly cover.

The Whinchat is very largely insectivorous, its food consisting chiefly of insects, their larvæ and spiders; it also eats small worms, small molluscs, and it has been known to feed upon growing corn; it is a great friend to the farmer, on account of its fondness for wireworms (the larvæ of spring-back beetles); these it obtains in considerable numbers in the Spring when the land lies fallow; and later, when the young turnips are opening their first leaves, it is a great enemy to the destructive turnip fly. I have tried it with the turnip

beetle, but the offensive red ink flavour of this insect was too much for it, and it turned away in disgust after tasting the first sample: berries, which (I believe) the Whinchat has been credited with eating, and red or white currants, it refused even to glance at.

The nidification of the Whinchat commences early in May and I have seen nests of fresh eggs which were taken quite a month later; but, in that case, the first nests had been robbed: although this species has been stated to be double-brooded, the evidence in support of that belief requires confirmation; the male bird certainly ceases to sing in July; this, one would not expect to be the case, unless it had concluded its domestic duties. The nest is usually placed on the ground among grass or heather; sometimes in the middle of a field or under shelter of a hedge, frequently under a furze bush, either on the ground or just above it among the branching stems; it is a large and rather loose structure formed of bents, fibrous roots and sometimes a little moss, and is lined with fine dry grass and hair.

The eggs vary from four to six, the latter being the usual number; they are greenish blue, in tint not unlike those of the Hedge Accentor, but generally of a less perfect oval, the larger, as well as the smaller extremity being somewhat pointed; they are finely speckled with reddish brown, the dots forming a pale zone round the larger end. The parents are very wary in discovering the position of their treasures, and will not approach the nest when they discover the presence of an intruder; but, if by chance you wander towards it, they fly round your head in the greatest anxiety uttering a thin dismal cry, which to me sounded like the word *tswee*, varied at times by their call note *u-tic:* I have also seen them drop on the grass and scramble along as if injured, apparently with the object of inviting pursuit; a trick which, did they but know it, only renders the birds'-nester more satisfied that he is on the right scent.

The flight of the Whinchat is graceful and undulating, and during the breeding-season consists of short journeys from bush to bush, varied by aerial evolutions in pursuit of gnats or other small winged insects. Suddenly it swoops downwards as it perceives some tiny beetle on a grass stem, to which as it seizes its prey, it clings for a moment with fluttering wings, then darts away to the topmost spray of a whin bush, and watches with ever springing tail for another victim. To the novice in the study of bird-life this active little fellow is a revelation.

Seebohm says: "Although the Whinchat so often chooses a perch near the ground, it by no means shuns the trees, and especially towards the end of summer, it is seen with its young brood high up amongst the branches. The

bird does not show that partiality for walls and rocks which is so marked a feature of the Redstart or Wheatear. In the pastoral districts the Whinchat, directly after its arrival, frequents the fallows which are being worked for the turnip crops, and on these places is found almost continuously until the neighbouring pastures afford it sufficient shelter. The Whinchats never roost in trees, but always on the ground. When they first arrive we find them at night on the fallows, but for the remainder of the season grass fields and turnip lands are frequented. In the wilder parts of its haunts the Whinchat roosts amongst the heath and the tangled undergrowth of gorse covert and brake. Another remarkable trait in the character of this bird is its activity in the dusk of the evening, a time probably when some insect that forms its favourite food is abundant; and its well-known call notes may be heard long after the birds themselves are concealed from view by the falling shadows of night."

This species is not a resident bird, although a few instances have been recorded of its passing the winter in England. It arrives in the South of England about the middle of April, reaching our Northern counties a week or two later: late in September it again journeys southwards.

My second captive Whinchat was given to me early in September, 1893, and I turned it into an aviary with other British Birds and a pair of Rosa's Parrakeets. I found it very shy; but unfortunately I was unable to keep it long enough to judge whether it was likely to overcome its want of confidence; for within a week, one of the Parrakeets caught it and crushed its skull, thus not only killing it but rendering it useless as a cabinet specimen. It took readily to the usual soft food mixture, commencing, like all soft-billed birds, with the egg and ants' cocoons and only eating the bread and potato when these failed; it was especially keen on mealworms, probably not discovering any difference between them and its natural diet of wireworms, and it devoured a considerable number of small cockroaches; flies and small moths it pursued and caught on the wing. It usually passed the night either on the earth or upon some twigs stuck into the earth. At times it uttered its thin piercing cry and its singular call-note; but, at that season, I, of course, could not expect it to sing. When anyone entered the aviary it flew wildly from side to side; but, at other times contented itself with keeping at a respectful distance, never showing any anxiety to escape, or even that restless impatience of captivity characteristic of the Hedge Accentor and many other small birds when freshly captured.

STONECHAT ♂ ♀

Family—TURDIDÆ *Subfamily—TURDINÆ.*

THE STONECHAT.

Pratincola rubicola, LINN.

INHABITS the central and milder parts of Northern Europe and southward to Asia Minor, Palestine and North Africa; specimens have also been obtained south of Senegal.

In Great Britain the Stonechat is resident and breeds locally in every county of Great Britain and Ireland, as also in the Hebrides; in the Orkney and Shetland Islands it is known to occur, but not to breed.

The Stonechat is a very handsome little bird, especially when in breeding plumage. The male has the whole of the feathers of the upper surface (excepting those of the upper tail-coverts which are white) dull black fringed with tawny brown; the head from a line above the eye and the throat velvety-black; wings and tail blackish brown; smaller wing-coverts, bases of inner secondaries and sides of neck broadly white; under parts tawny-rufous, deepest on the breast and sides, almost white at centre of chest, but shading into buff on abdomen; bill and feet ebony-black, iris dark brown. The female is altogether duller in colouring; the white wing-patch smaller, the tail-coverts reddish brown, the throat mottled with black. In winter the white on the sides of the neck becomes mottled with tawny, the secondaries have broad tawny borders and either whitish or tawny tips, the tail-feathers are also broadly bordered with buff; the ear coverts, chin and throat feathers are also slightly tipped on the fringe with tawny or white, and the upper part of the white neck-patch is mottled with tawny. The nestling is spotted above and below, and does not show the dark throat, or white patches of the adult bird; but, in other respects, resembles it in its winter plumage.

Though so different from the Whinchat in pattern, this species resembles it greatly in form and in its habits; it frequents similar localities—wild heathery moorland, gorse-clad commons, uncultivated broken ground, dotted with bush and bramble, with here and there loose stones, or bedded rocks moss-grown and venerable: in such haunts the Stonechat breeds, and there he may be seen poised on the topmost spray of the flowering furze with ever restless tail, anon darting from bush to bush with undulating flight, or hovering moth-like to seize some

fluttering insect. All attempts of the stranger to investigate its family concerns are met by the Stonechat with alarm and resentment; to anyone seeking the nest it is most confusing to hear the two parent birds *chacking* in different places, rarely in the same bush; the male also from time to time uttering a queer double note, in which he seems to proclaim himself a Wheatear.*

The nest is frequently placed in some depression of the soil partly or wholly concealed by herbage, below a furze-bush, or shrub; so that one may look beneath the very cover where it is situated, and not perceive it; it is always on the ground: its construction is loose, but tolerably neat, dry grass or rootlets and a little moss being used for the outside; finer grass, hair, feathers and sometimes wool, for the lining.

The eggs vary from four to six in number, and are not unlike those of the Whinchat; but they are greener in tint, and usually much more heavily zoned and spotted with red-brown; the spotting sometimes covers a much larger area; but frequently forms a suffused patch on the larger end, or a broad belt near the end; occasionally it is barely indicated: I once took eggs of the Spotted Flycatcher similarly marked, and which, but for their slightly paler ground-tint, might have been mistaken for eggs of this species.

The song of the Stonechat is soft, low, irregular but rather pleasant to listen to; it reminds me somewhat of the first efforts of the Indigo-Bunting of N. America, when that bird is "recording" his song. The call-note, which has nothing to do with his scolding, or complaining notes, is a sharp *tsik*, *tsik*, *tsik*, almost like the sound produced by striking two flints together.

The Stonechat feeds on insects, their larvæ, spiders, small worms, and during the winter on seeds: moths and butterflies it catches on the wing, and I was much interested, on one occasion, in watching it in pursuit of a Vapourer-moth, the circling onward flight of which seemed for some time to baffle it, though success at last rewarded its efforts to seize it. I have seen a House-Sparrow utterly nonplussed by the progressive gyrations of this little moth; the difficulty of catching it being increased by the fact that, when pursued, it constantly rises higher and higher; in the capture of such a moth only a bird with the agility of a Flycatcher or Wagtail can hope for success.

The flight of this species is short and undulating, its greatest efforts being made in pursuit of prey: when roosting or hopping, its tail is incessantly in motion: if terrified, this bird seems to prefer concealment to flight, always seeking the densest cover in the immediate neighbourhood, but sometimes revealing its whereabouts by uttering its alarm cry: even when the nest is approached, as already

* This scolding note is best expressed by the words *hweet-jurr* the terminal *r* having a vibrant sound.

hinted, the Stonechat is only seen when flitting from bush to bush, but it is heard incessantly.

I have only once had an opportunity of studying this species as an aviary bird. Mr. E. P. Staines, of Penge, an enthusiastic student of British cage-birds gave me a specimen, at the same time that he also brought me my Whinchat, in September, 1893: I turned it into the same aviary, and although I kept it for over a year, it ultimately lost its life from a similar cause, a Rosa's Parrakeet breaking one of its legs at the mid-tarsal or so-called knee-joint. I caged the bird up separately, after binding the limb up, but it only survived two days.

In the aviary the Stonechat is gentle and extremely lively; never quarrelling, but often obtaining a delicacy by superior activity: thus I have seen it seize a spider from under the very bill of a Wagtail and carry it half across the aviary before the larger bird had solved the problem as to how it had disappeared; it was also very expert in catching white butterflies on the wing, though it frequently lost them through getting hold of their wings only.

The Stonechat took to soft food without hesitation, and, many a time when the other inhabitants of the aviary were waiting for a fresh supply, I have seen him alight on the edge of the Parrakeet's seed-pan and swallow canary and millet: possibly it was in this manner he got in the way of one of these treacherous birds, and so lost his life. Of cockroaches he was inordinately fond, jumping into the beetle-trap and flinging them out, or swallowing the smaller ones at a gulp: sometimes he would snatch out a large female by one leg and fling the body away, following it up and again catching at a second leg with the same action, until he had completely dismembered the body, which would then be swallowed entire: it is astonishing to see what large morsels can be gulped down by these little birds!

This bird often sang in the early spring; but, as in its wild state, its warbling ceased entirely before the end of June: it was fairly tame, but would not actually take an insect from my fingers, always waiting until I dropped it, before attempting to secure it: like all insectivorous birds, it was more keen on spiders than anything else, and the larger they were the better it was pleased.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE REDSTART.

Ruticilla phœnicurus, LINN.

BREEDS throughout Central Europe as far as the North Cape and in the Pine regions of Southern Europe; where, however, it is rarely seen excepting on migration; in winter it migrates to Northern Africa, the Canaries, Madeira, Senegal, Abyssinia, Arabia and Persia. It is pretty generally distributed throughout Great Britain, though locally scarce; its occurrence in the Orkneys and Shetlands and in Ireland is rare, and it is unknown in the Hebrides.

The male bird in breeding plumage is very attractive, vaguely resembling the Robin in front and the Nightingale at the back. The upper surface is slaty grey, with rufous-brown tips to the feathers; the back of forehead and an irregular line over the eye white; rump and upper tail-coverts chestnut red; the two central tail feathers dark brown, the others chestnut red; wings smoky brown, secondaries with pale buff margins to the outer webs; base of forehead, face, ear-coverts, chin and throat black; chest and axillaries chestnut red; abdomen and flanks tawny buff; bill and feet black, iris brown. The female is altogether duller in colouring without the bright hues on the head and with the under surface paler. Both sexes in autumn have long white fringes to the feathers, giving them a greyish appearance which disappears in the Spring.* Nestlings are spotted both above and below and, but for their redder tails, might be almost mistaken for young Robins.

The Redstart is a summer visitant to Great Britain usually arriving in April, though its advent is somewhat dependent on the state of the temperature. It goes to nest in May, and in September flits by night to its winter quarters.

The favourite haunts of this species are ivy-grown rocks and ruins; old walls round gardens and orchards; plantations; shrubberies; scattered open woodland with ancient timber; groves of birch; wild commons, on poor and rocky ground strewn with bramble and brake. I first met with it in the Stockbury valley in

* It is usually supposed, that when the plumage of birds alters in the spring, it is done by casting the pale or dull tips; but, judging from birds of various species which have died in the middle of their transformation, I feel certain that in many cases the colouring grows in the feathers themselves. I have a Redstart before me in which the long fringes are partly buff and partly white, whilst the throat feathers are black excepting at the extreme tips.

REDSTART ♂ ♀

PLATE 11.

Kent: I was examining a tall roadside hawthorn edge for nests, when suddenly a small bird appeared, out of the field at the back, right in the centre of an open part of the hedge its tail quivering laterally, with a remarkable springy action quite new to me: at first I wondered what this lovely little creature could be; and then, suddenly, its identity with the Redstart revealed itself, and the next minute it turned and flitted away. The flight is irregular, jerky and not specially rapid, excepting when the bird is either startled or in pursuit of prey; in the latter case I know of no bird of its size which can equal it in activity, or in its power of doubling; the same may also be said of the male bird, when in pursuit of another of its own sex.

The food of the Redstart consists of insects and their larvæ, spiders, centipedes and, towards autumn, of unripe corn and small fruits: most of its prey is captured in the air and no insect pursued by it has the least chance of escaping: it will stop in midflight and poise itself, fluttering in one spot whilst it seizes a sun-fly; or, with equal ease, it will follow the wild zigzag wanderings of the small white butterfly: in pursuit of spiders, it will rise up and down, like the Humming-bird moth, before old moss-grown walls, searching every crevice for the lurking victims; an unwary centipede, projecting its head in a tentative manner from behind a fragment of loosened bark, or running hurriedly from the shelter of one boulder to another, is snatched up in a second and devoured; if a small green caterpillar crosses a woodland path, the Redstart darts obliquely down as though hurled from a catapult, alights for one second with quivering expanded tail, and seizing its victim gives it a bang or two and swallows it. If, however, the caterpillar is a large one, the bird either remains on the earth until it has knocked it to a pulp, or carries it to a branch and there, holding it by the head, strikes it backwards and forwards across its perch: gnats and flies are caught and swallowed on the wing.

It has been said that the action of the Redstart's tail is vertical, not lateral; but certainly to my eye it is rather lateral than vertical, and I have watched it in an aviary for an hour at a time: the action bears no resemblance whatever to that of either the Whinchat or Stonechat, but consists of a sudden lateral springiness with a slight expansion of the feathers. I repeatedly called the attention of others to this abnormal tail-movement and everyone who saw it agreed with me that it was a vibrant wag. When the bird is at rest on a branch, every thought of the little creature seems to be emphasized by a jerk, or an expansion of the feathers.

Nidification commences early in May, the site being just such as a Robin would select; a hole in a tree or wall, but sometimes a hollow gate post, or a flower pot is chosen: it is usually not far from the ground. The nest itself is

externally carelessly constructed of dry grass, rootlets, moss and sometimes a little wool, the interior being carefully lined with hair and feathers: the number of eggs varies from five to eight, though rarely exceeding six; in colour they much resemble those of the Hedge Accentor, but are slightly paler and more glossy.

Although the Redstart usually builds in holes and under cover, instances have been recorded of its forming its nest in an exposed situation; thus in the "Zoologist" for 1888, pp. 352-3, the Rev. H. A. Macpherson says:—

"In June last, Mr. Bell, of Liddell Bank, Dumfriesshire, an enthusiastic field naturalist, was kind enough to ask my friend Mr. Baily and myself to spend a couple of days in birds'-nesting with him on the Liddell. I was detained at home, but Mr. Baily went, and on his return reported the find of a Redstart's nest built into an old nest of a Song-Thrush. There was no doubt about the ownership of the nest, for the hen bird was seen sitting on the eggs, two of which were taken."

"The Thrush's nest measures about four inches across, and that of the Redstart two inches and one fifth inside measurement: the former was placed in a thorn bush, and was therefore open to the sky, though well concealed by branches above. I have seen a good many Redstart's nests, but I can only recall one instance in my own experience in which a nest of *R. phœnicurus* has been open to the sky. The nest in question was placed in a thick bush, and was surrounded by thickets."

The song of the Redstart is uttered either on the wing, or when perching; it is both insignificant and monotonous, somewhat resembling that of the Robin, though much less varied; its call-note is *wheet-tit-tit* and its note of alarm a melancholy *wheet:* when courting, like some other species, it records its song; that is to say, it sings it in a whisper, omitting the louder notes.

As an aviary bird, I have found the Redstart especially pleasing; it is quite hardy, provided that plenty of insects can be supplied daily, it rapidly becomes very tame and confiding, and is a most ornamental addition to one's feathered family.

In September, 1893, Mr. Staines brought me a healthy example, which I turned out with the Stonechat and Whinchat into one of my unheated aviaries, disregarding utterly the reputed extreme delicacy of this species. That winter the thermometer on several occasions registered ten or twelve degrees of frost, nevertheless the Redstart was not in the least disturbed by the cold, but seemed quite at home and happy. Every morning I put a "Demon beetle trap" into the aviary, and the Redstart was the first bird to rush in among the evil-smelling captives, seize one and fly off with it: no sooner was the first swallowed than he

was back again for another, and so on until he was sated; he was always actively flying about, and when I put in the saucer of soft food he invariably skimmed over it snatching up a fragment of yolk of egg, whilst the saucer was still in my hand. If I offered mealworms or spiders in my fingers it was also the Redstart who snatched the first, flying up to the wires and either poising with rapidly fluttering wings, almost like a Humming-bird, or clutching the wire work with his claws for one second, to ensure a correct aim at the dainty.

I found the Redstart rather fond of red and white currants in the early summer, and in the autumn thin slices of apple were pecked to pieces by it; but white butterflies seemed to form its favourite morsels and the astounding manner in which it would swallow one after another (wings and all) was worth the attention of visitors to my collection. One thing I specially noted; in common with every migratory species which I have kept, the Redstart failed to show any access of restlessness as the season of migration approached. Personally I do not believe, for a moment, that any bird, properly attended to in the matter of food, in an aviary, is even aware that there is a season of migration.

Aviculturists go at night and glare at their birds, with the moon lighting up their eyes into balls of fire, and the frightened creatures bang about recklessly in their terror of the vague monster near their cages. The verdict is:—"See the effect of the migratory instinct!" There may possibly be an inherited desire in some birds to travel at the approach of cold weather, but the true explanation of the so-called "migratory instinct" in birds is, to most of them, merely another name for short commons; and, to the more delicate species, the added discomfort of chilly nights. It must also be borne in mind that, at all seasons of the year, birds in aviaries are extremely restless on bright moonlight nights, the clear white light with the black shadows which accompany it, seem to startle birds; and, if your bedroom window is above an aviary, you will hear your captives thumping the wirework at the end of each flight, at all hours of the night: moreover the resident birds are quite as much given to this somewhat risky exercise as the migratory species.*

During the winter of 1894-5 the temperature of my unheated aviaries was unusually low; on one night (when the cold outside was very intense, two degrees below zero, in fact) the thermometer registered twenty-one degrees of frost in the passage between these aviaries; my Redstart, however, was as lively as before,

* This statement of mine has been disputed, on the ground that many young birds migrate before the summer is over, and that this cannot be the reason for the return of the birds to their northern breeding haunts in the spring. I never pretended that it was the only reason in the case of all birds, though I think it probable that it was the initial cause of the migratory habit, which has become fixed by repetition throughout numerous generations and persists even when the original cause for it has ceased to exist. The damp of winter is far more dangerous to bird-life than frost, but want of food is fatal.

and I hoped to keep him for many years in health: but one night, during his spring change of plumage, he crept into a log-nest and died: I am afraid that, in spite of abundant insect food, the cold of that winter was rather too much for him; yet he was bright and active to the last day of his life, showing no symptoms of distressed breathing, or any other signs of impending dissolution.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE BLACK REDSTART.

Ruticilla tithys, SCOP.

RESPECTING the geographical distribution of the Black Redstart, Seebohm writes:—"In the south it extends from Portugal through Algeria to Palestine. Northwards its range becomes more restricted, and apparently does not extend east of the valleys of the Dneister and the Vistula or north of Holstein. In autumn stragglers have been known to occur in West Russia, Scandinavia, the north of England, Scotland, and Ireland, the Faroes (on the authority of Captain Feilden), and even, it is said, as far as Iceland. North of the Alps it is for the most part a migratory bird, though a few are known to frequent situations where open water is to be found during the winter. South of the Alps it is found throughout the year, its numbers being increased during winter, its range at that season extending as far south as Nubia." "As the Black Redstart very rarely occurs in Norfolk, and has not been recorded from the Lincolnshire coast, it seems probable that the birds which visit our islands come from Holland, where it is exceedingly common, and follow the coast, choosing the shortest passage across the Channel."

This is an autumn and winter visitant to our southern coasts, being most commonly met with in Devon and Cornwall; but whether it really remains to

BLACK REDSTART ♂ & ♀

PLATE 12.

breed with us has been questioned: eggs supposed to belong to this bird have, from time to time been obtained in various localities, but in no case have the birds themselves been satisfactorily identified in connection with these eggs: thus an egg, believed by several eminent Ornithologists to be that of the Black Redstart, was passed round at a Meeting of the Zoological Society in 1878, by the Rev. R. P. Barron, M.A.; he having obtained it with two others in Hertfordshire in 1876. This egg was sent to me for illustration in my "Handbook of British Oology," together with the remains of the nest; Mr. Barron writing respecting it as follows:—

"The nest, I fear, is not very perfect, having been two years left in its place; it was found in the middle of May, 1876, right inside the hollow trunk of a living elm-tree, at a distance of about seven or eight feet from the ground, in a projecting ledge of the inside wood, and within a few feet of a small lake. There were originally three eggs, of a slightly pinkish tint before being blown; they had been forsaken; the nest seemed to be lined with hair and hay. You need not, of course, return the egg or nest."

When I received this egg I was satisfied, from the distinctly unhesitating decision of well-known authorities, that it was a genuine Black Redstart's; by daylight, it then showed a scarcely perceptible bluish green tinge, which has since entirely faded: looking at it now in conjunction with the remains of the nest, I see no reason why it should not be a white egg of the common Robin.

With regard to Mr. Stirling's nests, he does not indeed note that in one instance the hen was engaged in incubation; but, as he does not appear to have secured her, and all his nests were found in hedges or thorn fencing, the nidification of this species in Great Britain must still remain unproved, so far as his observations are concerned.

I have eggs of the Yellow-Hammer which might easily be mistaken for those of the Black Redstart; they are small for the species, being evidently deposited by a young bird, and are pure white. Unless the female was distinctly identified on the nest before she slipped away, it is possible that she may have belonged to quite another species: white eggs occur now and again with many birds, and it is probable that the same hen would lay white eggs year after year.

The Black Redstart in breeding plumage has the upper parts slate-greyish, the rump and upper tail-coverts chestnut; wings brown, with the secondaries broadly bordered with white on their outer webs; tail chestnut, with the two central feathers brown; forehead, face, chin, throat, breast, axillaries and under wing coverts black; belly and flanks buff; bill black, feet blackish, iris brown.

The female is much duller than the male, being smoky brown above and

slightly paler below, the white margins to the secondaries sordid, the chestnut of rump and tail suffused with brownish. Nestlings are spotted above and below, but as soon as they acquire their adult plumage they resemble the female; their full colouring not being attained until the second year.

In its habits the Black Redstart is very like the Robin, but especially in its frequent characteristic stoop, accompanied by an upward jerk of the tail, and its alarm note *tek*, *tek*, *tek*. It appears to court the neighbourhood of mankind, frequenting farmyards, orchards and gardens; and, as recorded by Howard Saunders, "Even in London one frequented the grounds of the Natural History Museum, South Kensington, from November 1885 until the snow-fall of January 6th, 1886."

The nest of the Black Redstart is usually placed, like that of the commoner species, in holes in walls or clefts of rocks, but at other times on rafters in sheds and outhouses, or niches and shelves in old castles or summer houses. No particular effort is made to conceal it. The structure itself is externally rough and loose, like that of the Robin; being composed of twigs, bents, rootlets and moss; the lining is neat and well rounded, of hair and sometimes feathers and cobwebs. The eggs number from four to seven, but usually five; they are as a rule pure glossy white, occasionally with a faint bluish tinge and more rarely still slightly brownish or minutely speckled at the larger end with brown.

Now, although my egg, when exhibited, was at once pronounced that of the Black Redstart, it was unfortunately, found in a nest built in a hollow tree, and it is believed that this species seldom, if ever, builds in such a situation. On the other hand there is no reason why some of the considerable numbers of this species which visit Great Britain when on migration should not remain to breed with us.

John Cordeaux, in the "Zoologist" for 1893, states that this species is a very frequent visitor at Flamborough Head; both in spring and autumn: in 1891, he says, they came in battalions, first some on April 6th and again a great rush on May 10th and 11th, scores of fine males being seen in hedges and gardens. Then again, in the volume of the same publication for 1894, G. W. Bradshaw records the fact that a male was shot at Ninfield near Bexhill, on April 10th.

It therefore seems far from improbable that the discovery of the nest by a lady in Dumfriesshire in 1889, an account of which was published in the "Zoologist" for 1890 by Mr. O. Hammond, was genuine; he says:—

"A lady, a near neighbour of mine, who is fond of observing birds, tells me that about the 12th of June last year, she found a nest of the Black Redstart about half a mile from Maxwelton, in Dumfriesshire. The nest was in a stone

'dyke' (wall), by the side of a road on a high hill, called 'Crossford.' The young were hatched. She tells me that she often went to watch the birds, both with a field glass and without one; that they let her get very near, that she is certain of their identity, and that they were Black, and not Common, Redstarts."

The food of this species consists of insects and their larvæ, spiders, small crustacea, and occasionally of small garden fruits: winged insects it captures in the air, after the manner of the commoner species, beetles, larvæ and spiders it seeks for on the earth, especially on ground which has been newly turned up.

In captivity the usual soft food, with the addition of cockroaches, spiders, mealworms, or wireworms, will suffice; but most small insects will be acceptable.

The song of this bird is simple, but the few notes are full and rich: it is therefore not surprising, seeing how handsomely it is coloured, that it should sometimes be kept in cage and aviary.

Not infrequently exhibited at the bird-show of the "Ornis" Society in Berlin, and at the Crystal Palace Show.

I can say nothing experimentally of this species: doubtless it would be easy to keep, and would make an engaging pet: but it ought to be turned loose in an aviary. Small insectivorous birds, when permanently kept in cages, rarely sing and usually die of apoplexy; at least that is my experience, excepting in the case of the Skylark, Woodlark, Nightingale, and sometimes the Robin: the last mentioned generally singing more or less, even when caged, but rarely living long in close captivity.

So long as any part of your domain is infested with cockroaches, you need never question the practicability of keeping Redstarts alive, no matter whether your aviary be warmed or unheated; if you can give them their daily beetle trap to forage in, Redstarts will live; but, if possible, extreme frosts should be avoided.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE RED-SPOTTED BLUETHROAT.

Cyanecula suecica, LINN.

ALSO known as the "Arctic Blue-throated Robin"; it is an occasional straggler to Great Britain, but chiefly to the southern and eastern coasts in autumn and spring; it has, however, been recorded from Scotland.* Seebohm gives the following account of its distribution:—

"The Arctic Blue-throat breeds within the Arctic circle, or in the birch-regions at high elevations of more southerly climes, both in Europe and Asia; in the latter continent it breeds as far south as the Himalayas, and occasionally crosses Behring's Straits into Alaska. The European birds pass through Central and Southern Europe and Palestine on migration, and winter in North Africa as far south as Abyssinia; whilst the Asiatic birds, with the exception of those individuals breeding at high elevations in the south, pass through Turkestan, Mongolia, and North China, and winter in Baluchistan, India and Ceylon, Burma, the Andaman Islands, and South China."

The male Bluethroat in breeding plumage has the upper surface brown; the tail-coverts chestnut, the two central tail feathers dark brown, the remainder with the basal half chestnut and the outer half dark brown; a white or pale buff superciliary stripe from the base of the upper mandible to some distance behind the eye; the cheeks, chin, throat and gorget glossy cobalt blue, centred with chestnut, bordered with black, and then on the chest again bounded by a belt of chestnut; remainder of under parts buffish white; the wing coverts and axillaries yellower; bill black, feet brown, iris brown.

The female is much duller, showing none of the blue or chestnut colouring of the male until old, when she sometimes more nearly resembles him in hues; the band across her chest is dark brown.

In the autumn much of the bright colouring is lost, the new feathers being broadly fringed with grey, but in the spring this bordering disappears.

* About sixteen or seventeen instances of its occurrence had been recorded up to 1877, but in September 1883, considerable numbers were observed on the eastern coast (chiefly in Norfolk) and a still greater number in 1884.

RED-SPOTTED BLUETHROAT ♂ & ♀.

PLATE 18

Young males resemble the female; but nestlings are streaked with blackish, and, excepting in the chestnut base to the tail, are not unlike young Robins.

In its habits this species much resembles the Redbreast, according to Gätke, but others state that it is far more like a Chat or Wheatear in its actions; its scheme of colouring reminds me somewhat of the last mentioned bird. In Heligoland it is said to frequent potato-fields in the autumn, but in the spring to haunt the gooseberry and currant-bushes in gardens, or beds planted thickly with cabbages, just beginning to throw out fresh sprouts. In the north however it is essentially a marsh-loving bird.

The Rev. H. H. Slater in his "Field notes in Norway" (Zoologist 1883) says of the Bluethroat:—"Very plentiful on the Dovre Fjeld. At Fokstuen I might have shot twenty males any day, but the females were great skulkers, and seldom showed themselves. The note of this bird is remarkably varied, but may be recognized by the metallic 'ting ting' with which it usually commences its warble, which is just like a couple of strokes on a small high-toned triangle. It also has a peculiar hurried way of singing, as if it were anxious to get to the end of its song as soon as possible. At Hjerkiem it was very common also, both in the birch scrub and even in the dwarf willow and juniper scrub above the birch limit on the fells. I found a nest here with eight eggs, and sat down by it to blow one of them. The old birds at once came up and hovered angrily round me, often within a yard of me, though the eggs were not at all incubated, the female also quite forgetting her usual anxiety for concealment. Not only they, but every other Bluethroat within hearing of this excited couple, hurried up also, until I must have had about a dozen scolding within ten yards of me at once; the moment I rose, however, they all vanished, like Roderick Dhu's warriors, 'where they stood.' The nest was made of the finest grasses, and placed in an open space in the birch wood, under a branch of trailing juniper."

The Bluethroat being, as already noted, an inhabitant of marshy land, it usually constructs its nest either in some chance cavity in the side of one of the many mounds or hummocks which abound on the irregular fjelds of Lapland and the tundras of Siberia, or in the more swampy parts of the forest. Naturally it is not easily discovered, unless by chance the incubating female is flushed from her eggs.

The nest itself is of loose construction, fashioned somewhat like that of the Robin, the materials used being mostly dried grass and rootlets, the cup being neatly lined with hair: the five to eight eggs have a greenish ground tint and are finely speckled and marbled with rufous-brown.

The food of this bird consists of small worms, centipedes, spiders, insects and

their larvæ and small seeds of weeds; the young are fed very largely upon mosquitoes, which the parents capture on the wing, after the manner of Flycatchers.

Seebohm gives the following full account of its song:—"On its first arrival it often warbles in an undertone so low, that you fancy the sound must be muffled by the thick tangle of branches in which you think the bird is concealed, whilst all the time he is perched on high upon the topmost spray of a young fir, his very conspicuousness causing him to escape detection for the moment. His first attempts at singing are harsh and grating, like the notes of the Sedge-Warbler, or the still harsher ones of the Whitethroat; these are followed by several variations in a louder and rather more melodious tone, repeated over and over again, somewhat in the fashion of a Song-Thrush. After this you might fancy the little songster was trying to mimic the various alarm-notes of all the birds he can remember; the *chiz-zit* of the Wagtail, the *tip-tip-tip* of the Blackbird, and especially the *whit-whit* of the Chaffinch. As he improves in voice, he sings louder and longer, until at last he almost approaches the Nightingale in the richness of the melody that he pours forth. Sometimes he will sing as he flies upwards, descending with expanded wings and tail to alight on the highest bough of some low tree, almost exactly as the Tree-pipit does in the meadows of our own land. When the females have arrived there comes at the end of his song the most metallic notes I have ever heard a bird utter. It is a sort of *ting-ting*, resembling the sound produced by striking a suspended bar of steel with another piece of the same metal."

It is curious that the Rev. H. H. Slater should have stated that the Bluethroat "*commences*" its song with the same metallic *ting-ting;* because, judging from the few birds I have kept which uttered metallic sounds, I should have expected the latter, and not Seebohm's version, to be the case.

Gätke in his "Birds of Heligoland" observes:—"One would hardly believe that the home of so lovely a creature as the Bluethroat extended so far north as the coast of the Polar Sea, particularly as its beautiful azure blue and rusty orange dress gives one the impression of its being a native of tropical latitudes. As a matter of fact, its life is divided between its Arctic nesting stations and its winter quarters, which extend to the hot regions of central Africa and southern Asia.

The migratory flights of this little bird between regions so widely separated have furnished the most interesting material towards a final solution of a hitherto open question, viz: "What is the greatest speed attainable by a bird during its migration flight? and have yielded the astonishing result of one hundred and eighty geographical miles per hour."*

* This statement has since been called in question by scientific Ornithologists.

Mr. Reginald Phillips says:—"This bird is always to be found near a marsh. What spot in the fjelds of Norway does not answer to that description? It is always heard on *dry* spots among short scrub, though hardly ever among trees." Avic. Mag., 1st ser., vol. iii., p. 72.

Why one hardly ever sees this lovely bird in captivity* is a puzzle which I have never been able to solve; not only are its plumage and song admitted to be well-nigh perfect, but it is itself naturally tame and confiding. Gätke says, for instance:—"If, during one's garden occupations, one pays no special attention to the bird, or pretends not to notice it, it will for hours long hop around near one, at twenty, fifteen, or even a less number of paces off, sometimes in rapid, sometimes in more measured leaps, catching insects the while; at each of its many pauses it gives a jerk with its tail, which it has raised above its wings, and looks around with clear, dark eyes. If, however, it becomes aware of being watched, it vanishes swift as lightning, in long bounds, under some shrubs or among some bushes, only, however, after a few moments, to again make its appearance as simple-hearted as before."

As regards the practicability of securing plenty of examples of this species, Gätke says:—"I remember one occasion, in May, 1845 or 1846, when there were some sixty of the most beautiful male birds of this species, all picked specimens, lying on a large flat dish in my cellar; and I might easily have doubled that number had I accepted all that were offered me on the same day. Aeuckens obtained nearly as many, all these birds having been caught by boys, in nets."

There is therefore not the least reason why this bird should not be as readily procurable, and when reconciled to captivity, make as delightful an aviary pet, as the universally beloved Pekin Nightingale *(Liothrix luteus)*: it ought to be quite as cheaply obtainable; possibly the White-spotted Bluethroat may be purchasable from the Dutch dealers, but I never saw a specimen of a Bluethroat exposed in the shop of any bird-dealer, either in England or on the Continent. Dr. Günther, the late keeper of the Zoological Department in the Natural History Museum, informs me that he has had several Bluethroats, but he found them very delicate and difficult to keep alive: this may perhaps be the reason for the rarity of this species in the market.

The Bluethroat is sometimes obtainable, for I know of two aviculturists who have kept it; Mr. Abrahams said that it had never come into his hands, but Mr. Dresser informs me that he has seen it offered for sale in the market of St. Petersburg.

* An example of the Dutch race was exhibited at the Crystal Palace in February 1896: it was somewhat knocked about; possibly freshly imported.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE REDBREAST.

Erithacus rubecula, LINN.

THE Robin breeds throughout Europe northwards to the Arctic circle, eastwards across Russia to the Ural Mountains, southwards to the south of Spain, the west of Northern Africa, the Canaries, Madeira and the Azores. In autumn it migrates southwards to Southern Europe, the Sahara, Egypt, Palestine, Asia Minor, N.W. Turkestan and Persia. In Great Britain it is generally distributed; it has not however, hitherto, been known to breed in the Shetlands.

Although called Redbreast the breast is rather tawny sienna than red. The adult male has the upper parts olivaceous brown, slightly more ruddy on the crown: outer wing-coverts with the tip of the outer web buff; primaries dark ashy grey, with brownish outer webs, secondaries narrowly tipped with whitish; a frontal band, the lores, ear-coverts, chin, throat, and breast tawny sienna, or orange chestnut; belly pure white; flanks and under tail-coverts sandy brownish shading off into buffish white; tail below ashy; bill black, feet brown, iris almost black.

The female has the frontal band, lores, and chin more smoky, and the throat of a duller, more sandy, hue excepting at the sides; the crown of the head and the bill are also broader, and the latter shorter, than in the male.

Nestlings have all the small feathers of the upper and under surfaces spotted in the centre with buff and tipped with blackish; but birds of the year differ but little from their parents excepting that their colours are a little paler.

The habits of this most confiding and familiar little favourite are pretty generally known to bird lovers; it is fond of haunting the homes of mankind, but more especially in the winter-time, when it thereby has a chance of appeasing the pangs of hunger; but many pairs remain to breed in holes and corners of garden, orchard or outhouse, and therefore are occasionally seen about one's premises almost throughout the year. It would appear that at the pairing season each male Robin claims, and defends against all intruders of his own species, an area sufficiently large to provide food for his expected family, and many are the battles which are fought, even to the death, in the early spring.

REDBREAST

PLATE 14

In the winter if you care to try the experiment of putting out a trap baited with a lively mealworm, you may catch Robin after Robin without difficulty; but, in the spring, should you have a nest in your garden, you will see one pair only; should a stranger appear, he is chased and attacked immediately; woe be to him if he be the weaker bird, for even his death will not appease the rage of his opponent; mutilation alone being satisfactory to his vengeful eye.

The only time at which we miss the Redbreast about our homes is during the moulting season; for then it retires to the seclusion of the woods and coverts of the country to change its clothing; but no sooner has it donned its bright winter dress than it is with us again. At this season when we gladly welcome the reappearance of our trustful little friend, and delight, when gardening, to watch it impudently hopping about within a foot of our spade, or even for the nonce alighting on it to peep into the earth we have just turned over.* The Latin races are capturing this charming bird in myriads and slaughtering them for food.

Excepting when on migration the Robin rarely flies high or for great distances. The flight itself is widely undulatory; the moment it alights and every half minute or so subsequently if it should have settled on a branch, it goes through a spasmodic little stooping action accompanied by a lowering of the head, flip of the wings and an upward jerk of the tail: on the earth it proceeds by long hops, with a pause and the characteristic epileptic stoop after every few hops.

The building site of this bird varies almost endlessly, †any hollow into which it can stuff its nest seems to be welcome; if built near the habitation of man, it may be placed in a corner of an outhouse, or a ledge in a dust-bin, in a watering-pot hanging on a nail, a quart pot hanging on a fence, a flower pot in a shed, in ivy on the house wall, in creepers on a fence, in the side of a bean-stack or pile of brush-wood: in all which situations I have found it; in the country an old teapot flung into a plantation may be chosen, or a slight depression in the ground below a tree or ivy-covered stump, a cranny in a rock or a deserted chalk or sand-pit, or a hole in a grassy bank: but the Robin's favourite nesting-site is at the side of a wide public road bounded on either hand by a wood, from which a sloping irregular bank partly covered with ivy and bramble descends to the thoroughfare: during the frosts of winter or during

* When digging one day in my garden a Robin hopped between my feet alighting on the top of my spade, from which, a moment before, I had removed my foot, and there it sat peeping into the hole and then glancing sideways up in my face as if asking me to continue to turn over the earth; a feat which I could not accomplish without disturbing the bird.

† Mr. Frohawk writes that a pair of Robins built on the bend of a gutter pipe to his house in 1894 and 1895, at a height of 20 feet from the ground: the pipe was slightly concealed by a few entangled sprays of *Ampelopsis Veitchii*: the situation was identical each year.

heavy rains a large flint or fragment of rock is dislodged and rolls into the road leaving a hollow partly overhung by ivy or fern: such a site is tolerably certain to be occupied the following spring, and each succeeding year, by a pair of Redbreasts.

I believe that of the many Robins which nest in our gardens and houses, not one pair in twenty has the pleasure of seeing its young leave the nest; nearly the whole of them fall victims to cats. As to the cat not eating Robins, that I have proved to be the wildest fiction; a mere rustic legend, no more true to fact than the reputed poisonous qualities of the slow-worm and newt.

The nest of this bird, when placed in holes, is a loosely built structure, but is more compactly formed when situated in ivy or creepers,; the outer walls are made of fine roots, bast, or coarse dry grass, bents, and sometimes a few dead oak leaves intertwined with hair and moss; the cup is neatly lined with fine grasses, fibre and hair: when built in holes moss is largely used and when placed in ivy the front wall is largely covered with dead oak leaves, giving it somewhat the appearance of a Nightingale's nest.

The eggs vary in number from four to seven, but there are rarely less than five or more than six; in colour they are usually fleshy white, more or less mottled and spotted with sienna-reddish and red-brown; sometimes the spotting is weak, and forms a mere rusty nebula at the larger end; occasionally the eggs are pure white.

The note of anxiety is a sharp *tick*, *tick-a-tek*, *tek*, *tek;* but when the young are out of the nest it is sometimes varied by a veritable croak, reminding one of the Nightingale; a thin plaintive piercing note, a kind of *tseet* (the same as the distress note) is usually repeated at intervals for a short time before the bird sings. The song itself is sweet and clear but somewhat plaintive: Henry Stevenson, in his "Birds of Norfolk," thus poetically describes it:—"Clear and sharp it sounds in the fresh morning air, whilst still the hoar frost hangs upon the trees, or glitters on the threads of endless gossamer. The sportsman hears it by the covert side as at midday he rests awhile, and seeks refreshment after all his toils; and later still, as he 'homeward plods his weary way,' that simple note, in some mysterious manner, awakens recollections of the past, when the same sport was shared with dear and absent friends. Again, in the months of September and October, as the day declines and the evening 'draws in,' how we listen to him in our gardens and shrubberies now chattering his little mandibles as he jerks up and down on some projecting branch, now singing sweetly, or at short intervals waiting for, and answering some neighbouring songster."

It has been said that the Robin sings best in the autumn and winter, but

this is not the case; the song is best heard when nature is asleep, yet is quite as charming in the spring, when he carols to his mate as she sits upon her dappled eggs; yet he often wanders far away at this period and she, disconsolate and hungry, calls to him with her far-reaching and melancholy *tseet*, until he reappears and brings some appetizing morsel to reward her patient toil: for it must not be supposed that Finches alone feed their hens upon the nest, many other birds do the same and often have I seen the Robin do so.*

The food of the Robin is very varied; small worms, spiders, centipedes, insects and their larvæ forming its staple diet during the open months, but it by no means despises currants and cherries, and during the winter it largely subsists upon berries, probably seeds of weeds, and all kinds of household refuse picked up in the farmyard, or purposely thrown out for him by those who love to see a little bright life about their homes during the desolate months of the year.

As a cage-bird the Redbreast is a great favourite, but it is almost a sin to confine this trusting little fellow, and it is somewhat risky to turn him out into an aviary; for, although at various times I have kept Robins which never molested other birds, individuals have been known to prove dangerous companions to less active species. A friend of mine, who turned loose a Robin into his aviary, lost a Bullfinch, Goldfinch, and Linnet in a single night, the Redbreasted little ruffian having drilled a neat hole into the skull of each of them.

My first experience of Robins in captivity was in the winter of 1886-7, when I caught twelve and selected the three brightest for pets, letting the remainder fly. As usual, these birds readily became quite tame, taking worms, insects, &c., from my fingers; indeed one of them did so on the third day after its capture. It soon learned to know me so well that it would follow me from one end of its flight cage to the other. I used to sit down and watch this bird, and I made a note of the number of beats of the wing which were required to take it from one end of its little aviary to the other; this I could only do accurately by ear, but the number hardly ever varied: I then calculated that, flying in the same manner, the Robin would have to flap its wings 9240 times to cover a mile. Two of these Robins died in the spring, one after eight, and the other after nine months' confinement; the third I gave away to a friend.

In September, 1887, I again caged two Robins, the first of which became perfectly tame in about a week and would come at my call to take mealworms

* The American Bluebird is most attentive in this respect, constantly and most unselfishly giving every insect to his wife, from the time of courtship until the young are hatched. The ordinary call-note of our Robin is a short sharp whistled note.

or earthworms from my fingers; both died of a pulmonary complaint in the spring of 1889, I having turned them into an unheated aviary: it thus became clear that after eighteen months of comparative warmth, the Robin is unfit to cope with the severity of an English winter.

Since then I have had several of these charming little songsters, but of late years the only one I have had was a cock rescued from a cat, which had broken its wing; it spent the summer of 1906 in one of my aviaries, and sang incessantly; but in the following winter it died. I always feel that a bird which will of its own free-will enter your house and remain for weeks (if you permit it) a willing captive, should not be "cribbed, cabined or confined." One autumn, after allowing a Robin to take possession of a greenhouse for a week, I was finally obliged to drive him out; on account, not only of the disfigurement of my plants, but of his propensity to dig for worms in the flower-pots.

Family—TURDIDÆ. *Subfamily—TURDINÆ.*

THE NIGHTINGALE.

Daulias luscinia, LINN.

HOWARD SAUNDERS gives the following as the geographical distribution of this species:—"On the Continent, Northern Germany appears to be the highest authenticated latitude for our Nightingale; south of which, except where systematically molested by bird-catchers, it is generally distributed throughout Central Europe. In such southern countries as Portugal, Spain, Italy, Greece and Turkey, it is very abundant in suitable localities; breeding also in North Africa, Palestine and Asia Minor. Its north-eastern limit in Europe appears to be the valley of the Vistula; and in Russia it is confined to the southern provinces."

The Nightingale visits Great Britain early in April, but does not reach the

more northern counties until later, it leaves us again in August and September; it has not been known to occur in Ireland, its occurrence in Scotland is doubtful and in East Devon, Shropshire and South Yorkshire it is rare; its distribution is somewhat local, but in the woods of some of the southern counties it is very abundant.

The colouring of this species above is russet-brown, the tail-coverts and tail being chestnut reddish. Below it is pale buff, greyish on the breast and flanks and brownish on the axillaries; under tail-coverts buff, deeper than on the centre of throat and abdomen. Bill brown above, pale horn-colour below; feet brown; iris hazel.

The female has a broader crown and bill than the male, but resembles it in colouring. Nestlings are darker and have most of the feathers above spotted with golden-brown; below they are barred with greyish-brown.

The Nightingale is a bird of the woods, its favourite haunts are copses, plantations, shrubberies and all timbered land where trees rise amongst dense and tangled undergrowth; but open forest is not suited to its somewhat timid and skulking nature. As one wanders on the outskirts of some of the almost impenetrable Kentish woods, it is no unusual thing to see this russet coloured songster dart out from the covert, and after an irregular flight of a few yards disappear again amid the thick foliage.

In its actions the Nightingale resembles the Robin, but it has none of the impudent confidence of that bird; and, though very pugnacious, it is no match for the Redbreasted bird; of which, indeed, I proved that it stands greatly in awe:—On one occasion I turned a Nightingale loose in an aviary in which a Robin was flying about and, no sooner did they catch sight of one another, than Bob flew straight for Philomel, who crouched on the ground in such abject terror, that I quickly snatched him up to save his life. (It was a male Philomel!) In a state of nature, when scared, the Nightingale always seeks concealment in some tangled cover of bramble, hawthorn, scrambling honeysuckle or shady evergreen, uttering the while its harsh croak of alarm, and clicking together its mandibles after the fashion of other insectivorous birds. On the rare occasions when one catches a glimpse of it, in some small clearing in wood or shrubbery, seeking for small worms, beetles, or spiders, its behaviour is precisely that of the Robin, the manner in which it jumps and jerks at the worm, and having gulped it down, stands for a moment with head erect and tail slightly raised; then bobs, flicks his wings and throws up its tail, is in every respect a perfect facsimile of the Redbreast's actions. Like most of the Thrush-tribe the Nightingale turns over dead leaves most industriously in the search for concealed insects.

Such is my experience of this bird as seen in the Kentish woods; but Henry Stevenson, speaking of it in Norfolk says:—"Though frequenting the thick cover of our groves and shrubberies, the Nightingale is by no means a shy bird, at least on its first arrival, but sings fearlessly throughout the day in the most exposed situations. In my own garden, bordered on two sides by public roads, I have known one sing at intervals throughout the day, on the yet leafless branches of an almond tree, perfectly indifferent to the voices and footsteps of the passers by; and on the 1st May, 1864, a most exquisite songster stationed himself on a small tree, in Mount Pleasant lane, close to the footpath, where groups of Sunday walkers, both morning and afternoon, stopped to listen to its 'sweet descants,' and probably for the first time in their lives saw, as well as heard, a Nightingale."

This last sentence chimes in exactly with my belief. It is not often easy to discover the author of sweet Philomel's discourses; one needs to look long and carefully; and perchance, at length, one finds that the singer which one has been seeking for in the undergrowth, is perched among the smaller branches of some lofty elm; not that it always seeks so high a seat; for, many a time, on a hot spring morning I have seen it in full song in a plantation of birch trees grown for hop-poles, and among the briars and rank vegetation at their roots I have often sought and sometimes found its nest.

The song of the Nightingale surpasses in melody and charm that of any other bird; it commences usually with a long-drawn plaintive *phwee*, *phwee*, *phwee*, *phwee*, repeated from four to six times in succession, and followed by a rapid water-bubble *chooka*, *chooka*, *chooka*, *chooka*, *chooka*, *chookee*, and then perhaps a series of clear notes commencing *toocy*, *too*, *too*, *too*, *tooti*, more and more rapidly uttered and increasing in power; sometimes the song commences with this *toocy*, yet more often with the complaining note; but, without the bird singing at one's side, it is impossible to remember, much less to do justice to, this brilliant musician; once heard, it can never be mistaken for anything else; the Blackcap sometimes strives to copy the melody, and does it fairly well; but he sings too loud, without the softness of sweet Philomel. On one occasion when out with Mr. Frohawk at twilight, on the skirt of a Kentish wood, we heard a Song-Thrush and a Blackbird trying to outdo a Nightingale: it was all in vain, all three birds were perfect masters of their art; the Thrush, by introducing part of the song of the Nightingale, much improved his own natural performance; but the Blackbird scorned to copy, he swung out his full flowing phrases in grand style, and when he knew himself beaten, in a royal rage he charged the tree in which the little russet songster sat, and drove it from its retreat; but the Nightingale, nothing daunted, perched

on a branch of another tree some fifty feet away, and then the concert recommenced: never before or since have I heard any of these three species sing so superbly.

The nest of the Nightingale is usually placed in a hole in the ground, less frequently in the forking base of a pollard partly overhung by rank grass and fern-fronds, rarely in bramble or hawthorn, a foot or more above the earth, but in such unusual positions I have only twice found it, its usual site is in a depression at the foot of a tree, pollard, or bramble-bush well concealed by ferns, grasses or other short undergrowth. On several occasions, however, I have found it fully exposed to the sky, among the drifted oak-leaves in a small clearing close to some blind keeper's path: when thus situated, it appears to the casual pedestrian to be merely a round hole among the dead leaves; but, to the experienced birds'-nester, it is fully revealed at a glance. Curiously enough the rustics who, in a desultory fashion, have plundered and destroyed nests from their babyhood upwards, invariably overlook all nests which are merely protected by their environment in this fashion, and express the greatest wonder that a townsman should instantly recognize as a nest that which they would have passed as a hole in the ground, or a bunch of leaves.

The structure itself is loosely put together, the cup very deep; the outer walls composed of coarse dry flattened bents, rushes, or even fine flags, lined with finer bents, root-fibre, and sometimes a little horsehair; the whole of the outer wall is covered and concealed by dead oak-leaves. The eggs, which number from four to six, are brownish olive; rarely, with a red-brown zone round the broader extremity. Still more rarely, they are bluish green, mottled with reddish brown, and somewhat resemble eggs of the Bluethroat: but eggs of this type I have never found, and those with the red-brown zone only twice; the colouring is doubtless protective, for the typical eggs look at first glance much like oval pebbles at the bottom of a small hole in the earth.

The call-note is said to be *wate, wate, cur-cur;* but this always appeared to me to be a note of caution or anger; the call to the female is either a piercing thin key-whistle like that of the Blackbird and Robin, to which she replies in the same manner, or a soothing *tooey* to which she does not reply, at least I never heard her; but perhaps the fact that a human being was in dangerous proximity to her nest, may have made her cautious: the alarm note is a low guttural sort of croak. The hatching of a brood is signalized by a different note which has been rendered *churr, churr.* The song of the Nightingale commences soon after his arrival on our coasts and continues until the young are hatched,

which is usually in June, after this it is only heard in the evening after the arduous duty of providing for its family is completed for the day.

As the young birds hear but little of the song which is their greatest gift, during the rearing season, it has been suggested that they may learn it while still in the egg; but this idea seems to me far fetched, and most improbable; at best the unborn chick could barely be capable of appreciating sound for a day or two before hatching: but, what seems to me to clinch the matter, is the fact that, if taken from the nest when eight days old and hand-reared, Nightingales in confinement do not sing a note; or such is my experience. I think it far more likely that the song is partly learnt when the father is at evensong and most other voices are hushed, for then the Nightingale's melody sounds most impressive; probably the finishing lessons are given in Africa, during our winter months.

It has been said that Nightingales do not bear confinement well, yet I have seen individuals which have lived for years in quite small cages; I remember one which hung against the wall of a house exactly opposite our hotel bedroom window at Baden-Baden, about the year 1867; we were told that it had been caged for several years, and it sang grandly when we heard it. Many years later I saw one at an inn, at Selling in Kent, which had been caged for about eight years and still sang well. Every year many are exhibited at bird-shows, the same specimens being shown in successive years. I have also known an instance of this species breeding and rearing young in an aviary.

The spring-caught Nightingales are those which are sold for songsters, those obtained on their autumn migration are said rarely to live. In June, 1887, I secured a nest of five birds nine days old, and (following the usual most misleading instructions) I fed them, amongst other things, on finely chopped raw meat; consequently they all suffered from violent purging, which carried off the two strongest. Guessing that the meat was the cause of this disaster, I at once changed their diet, and successfully brought up the three others upon a mixture of four parts pounded dog-biscuit, four parts oat flour, two parts pea-meal, two parts yolk of egg, and one part ants' cocoons, the whole well mingled with water into a moist paste. When about six weeks old, they began to quarrel about trifles, and pull out one another's feathers; therefore early in August, I placed them in three separate sections of a large aviary-cage with sliding wire divisions, and here they soon recovered their plumage. They were very tame, but, like most birds, objected to being handled; although this was frequently necessary, as they used to get their feet clogged with dirt, which they never attempted to remove for themselves I now changed

their diet again; that upon which I had reared them proving too fattening, now that they were full-grown; I knocked off three parts of the oat-flour and one of the pea-meal, substituting finely crumbled dry bread. Curiously enough these Nightingales would persist in sitting in the direct rays of the sun, the result of which was that two of them got heat-apoplexy and lost all interest in everything, appearing as if stuffed, neither moving nor eating. I gave them both a warm bath after which one of them recovered, but the other died miserably about the end of August. It was said to have warbled a little before its attack, but I doubt it myself.

My two remaining Nightingales became wonderfully confiding, and would come and pick caterpillars or mealworms out of the palm of my hand, but neither ever sang a note; one died from a recurrence of sunstroke in August, 1888, and the other (a fine male bird) went off in a decline at the end of the same year. As pets, hand-reared Nightingales are neither so pretty, nor so charming, as Robins; their outline is pleasing, and their full intelligent eyes give them an alert appearance not belied by their sprightly movements; but one wants something more than a russet brown bird which only croaks or *tooeys*; a Nightingale which sings is a joy for ever, but a silent Nightingale is a fraud.

A caught Nightingale which I had some years later, sang a little in the evening, but never attained to the full song; it seemed healthy, but did not live many months.

There are very few birds which sing their natural song when hand-reared, and the Nightingale is not one of them: whether the Robin is, I do not know; I tried to rear a nest of these once, but foolishly gave them some chopped raw meat, which killed the entire half dozen in one day. The best mixture for successfully rearing all soft-food birds is as follows:—Four parts ants' cocoons, three parts yolk of egg, one part dry bread-crumbs; the whole mixed very moist at first, but given drier as the birds get older: the young of Butcher-birds, Crows, &c., should have raw meat also, because flesh is to them a natural article of food.

This species concludes the Thrush-like birds. *(Turdinæ)*.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE WHITETHROAT.

Sylvia cinerea, BECHST.

BREEDS abundantly in Scandinavia and Western Russia as far north as lat. 65°, and in the Ural Mountains up to lat. 60°, southwards throughout Europe to the Mediterranean. It winters in the Canaries and Northern Africa, passing through N.E. Africa on migration and extending its wanderings down the west coast to Damaraland. Eastwards it occurs in Asia Minor, where it is abundant in the nesting-season, in Palestine, where it is partly resident, in Persia, Turkestan and South-west Siberia.

In Great Britain it is very common and generally distributed, being most rare in the extreme north of Scotland, and unrecorded from the Outer Hebrides.

The adult male in breeding plumage has the head, neck and upper tail-coverts smoky grey, the remainder of the upper parts greyish brown, deepest on wings and tail, the wing-coverts and innermost secondaries broadly margined with rufous; the outer tail-feathers paler than the remainder, broadly bordered and tipped with white. Under surface white, shaded on the breast with vinous-buff and on the flanks with buff; under wing-coverts and axillaries smoky grey; bill dark brown, the lower mandible paler, feet pale brown, iris hazel. The female differs in the absence of the grey head and upper tail-coverts, and vinous breast. After its autumn moult the male resembles the female. Young birds are more rufous brown.

The Whitethroat reaches us about the second week in April, though in mild seasons I have met with it earlier; it takes its departure early in September. It is essentially a bird of the thicket, hedgerow, shrubbery or garden: in open spots overrun with blackberry, honeysuckle, stunted hawthorn, long rank grass and nettles you are almost certain to hear its cheerful little song or its harsh alarm note. Though rarely met with in dense woods, it abounds in those narrow strips of wood known in Kent by the names of *shaws* and *shaves;* yet in lanes, and little frequented country roads where the hedges are untrimmed, and fringed at the bottoms with nettles and goose-grass, the Whitethroat is most in evidence; here, among the nettle heads, the flimsy nest is often suspended; not that the

WHITETHROAT ♂ ♀.

PLATE 16

nest is always flimsy, for I have taken examples almost as stoutly built as that of a Sedge Warbler; nor is the nest always situated in so apparently perilous a position as a bunch of nettles, for I have often taken it from the top of a clipped hawthorn hedge partly overgrown with ivy; but it is most frequently found low down in bramble or dense but loose vegetation and more often than not near the foot of a thick hawthorn hedge.

The nest is usually lightly constructed of dried stalks of plants and grasses with here and there knots of spider's silk or sheep's wool; the lining is composed of fine bents and horsehair: it is generally very deep. Of ten nests in my collection, obtained during two consecutive years, two are interesting: one on account of its unusual size, the diameter of the interior of the cavity measuring nearly three inches, and thickly lined with black hair; the other has the walls rather thickly edged with sheep's wool intertwined with the grasses.

The eggs, which usually number from four to five, rarely six, vary a good deal in ground-tint and in marking; the best known type is greenish, indistinctly mottled with greyish olive, the larger end zoned with spots and specks of slate-grey and brown; another not uncommon variety resembles the egg of the Garden Warbler excepting for a belt of scattered slate-grey spots towards the larger end, a third variety is stone-grey with slightly darker mottling and looks almost like a diminutive egg of the Pied Wagtail; a fourth, somewhat larger, is similarly coloured, but spotted and splashed as if with ink; then there is a dark mottled greyish form, almost like a small egg of the Titlark; a pale ruddy variety with greyish mottling, reminding one of the Spotted Flycatcher's egg, and a greenish white egg with scattered brown mottling speckled with blackish, and vaguely resembling some eggs of *Passer;* rarely its eggs are almost like enlarged editions of those of the Lesser Whitethroat, but with the surface between the blackish markings splashed and speckled with olive brown. The above are a few of the forms taken by myself, and it would not be difficult to add to the list, indeed an assiduous collector never seems to come to the end of variation in this egg, either in size, form, ground-tint, or pattern: I have one almost like that of the Dartford Warbler, but nearly spherical; others which, had I not taken them myself, I should have declared to be large eggs of the Sedge Warbler laid by an old bird, yet I took them from a most typical flimsy Whitethroat's nest, built in nettles: they are almost large enough for eggs of the Garden Warbler. Many even of the best collections give a very poor idea of the modifications to which this bird's eggs are liable, and the published descriptions seem, so far as I have been able to judge, to have been copied from one ornithological work into another, most authors speaking of specimens being pale buff, or buffish white, spotted with

yellowish brown and with violet-grey shell-markings: it would be rash to assert that such eggs never existed, but I must confess that I never saw anything approaching this variety among the hundreds which I have examined.

This species is very largely insectivorous and its young are reared solely upon this diet, caterpillars, spiders, and crane-flies being its favourite articles of food; in the early fruit season it also robs the raspberry canes and currant-bushes, and is not averse to elder- and blackberries; early in August it is said also to eat the unripe milky corn.

The "Nettle Creeper," or "Jolly Whitethroat" as the rustics call this bird, has a short but clear and melodious song, and may frequently be heard in the country lanes singing from the top of a hedge or one of the lower branches of a tree; sometimes you may see him from simple exuberance of joy soaring upwards after the manner of a Pipit and presently flinging himself downwards to the hedgerow; if you approach to watch him more closely he slips over to the other side of the hedge, rising and falling just ahead of you until convinced of your pursuit, when he wheels round and returns perhaps to the point from which he started; near to which, perchance, his nest may be concealed. The call-note is a clear *phweet-phweet-phweet*, but the alarm-note is a harsh hissing sound.

The Whitethroat is well-known as a cage-bird and is not especially delicate, if supplied with plenty of insect food; but, if this cannot be provided, he is unable to stand an English winter in an unheated aviary, and without question an aviary, not a cage, is the only confinement to which any Warbler ought to be subjected: doubtless, like all these birds, the Whitethroat does in time become reconciled to the close imprisonment of a cage; but no aviculturist, unless a great worshipper of bird-shows, would take much pleasure in watching its cramped movements in such an enclosure.

The Whitethroat will sing freely in an aviary, but whether it ever does so in a cage I cannot say; a male captured on its arrival in this country, probably would do so, in time; but a hand-reared bird would be unlikely to give this satisfaction to its owner. It is therefore almost certain that caged Whitethroats are rarely kept excepting for the show-bench; they would hardly be selected for their brilliant plumage, and their song would certainly be heard to the greatest advantage, to say the least of it, in an aviary. To keep so restless and sprightly a bird as the Whitethroat in close confinement, merely for the sake of the slight profit which it may bring to its owner in the way of prizes, is not only a cruelty, but a meanness, of which no real bird-lover, who took the trouble to reflect upon it, could well be guilty.

LESSER WHITETHROAT (♂, ♀)

PLATE 17.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE LESSER WHITETHROAT.

Sylvia curruca, LINN.

THE European race of this species ranges northwards almost to the limit of forest-growth; southwards it breeds throughout nearly the whole of temperate Europe, to Southern Europe it is chiefly a summer visitor, but Howard Saunders states that "a few pass the winter to the east of Malaga." Its usual winter quarters are Northern and Central Africa, Arabia, Palestine, where it is also said to breed, and Persia.

In Great Britain its distribution is decidedly local, being especially so on the east and west coasts and in Scotland, whilst in Ireland it is not known to occur.

The adult male has the crown smoky grey, the nape, back and upper tail-coverts brownish slate-grey, the wings greyish brown with paler margins to the innermost secondaries, the tail-feathers dark brown excepting the outer ones, which are greyer and have white outer webs; lores and ear-coverts dark brown. Under surface white, slightly tinged with yellowish brown on the breast and flanks; bill dark slate-grey inclining to black, the under mandible with pale base; feet slate-grey; iris pale brown. The female is slightly smaller and duller-coloured than the male. Young birds are browner, with better defined pale margins to the wing-feathers; bill and feet paler; iris hazel.

The Lesser Whitethroat reaches us late in April or early in May and usually leaves us again late in September, but stragglers remain nearly a month later, and Mr. Swaysland even obtained an example at Brighton in November.

This species is more skulking in its habits than its larger relative, it frequents the margins of dense woods, copses, plantations, shrubberies, rural uncultivated hedges, especially those which border little frequented lanes and thickly planted gardens. When disturbed it either slips away into the dense scrub or flies up into the branches of some lofty tree where it hops restlessly from twig to twig uttering an excitable defiant note *tsee*, *tsee*, *tsee*, repeated rapidly nine or ten times: if disturbed from its nest, however, its note is more like *kek*,

kck, kck: the song is a rapid repetition of one whistled note; it has been called a trill, but is too staccato to answer that description; a few lower notes are sometimes added, but even these have a monotonous character.

The nest is constructed at any time between April and June, but I have found more in May than in either of the other months; it varies considerably in its height from the ground, being sometimes placed among the upper twigs of a tall hawthorn hedge, sometimes in brambles only a foot or two above the earth; it is also occasionally found in furze-bushes; but I took most of my nests either from hedges on the outskirts of woods, or in country lanes, the height from the ground being about four feet. Mr. Frohawk tells me that the Lesser Whitethroat, when building in shrubberies, very frequently selects the snow-berry as a site for its nest: he also reminds me of the frequency with which those found by us at various times contained imperfect clutches; a full clutch being the exception, and two to three eggs the rule. Although the bird itself is very shy, I have not observed that it makes any special effort to conceal its nest, and many a time when I have found it to contain only one egg, and have left it in the hope of subsequently securing it with a full clutch, I have found it torn out by some village clown.

To take one egg from the nest of the Lesser Whitethroat is sufficient to ensure its desertion: even if a similarly coloured small marble is substituted, the only result is that the bird ejects the marble and then lets the empty nest alone: I never knew her to lay a second egg after the first had been abstracted. Like the Wren, this little bird will run no risks; if you interfere with her domestic arrangements, she will, for the time, give up housekeeping.

The structure of the nest is much firmer, and, to my mind, neater than that of the Common Whitethroat; a pretty little cup formed of stout bents and rootlets firmly interlaced with the twigs among which it is fixed and interwoven here and there with a little fine wool and spiders' cocoons; it is lined with fine bents, root fibre and a little horsehair. The eggs vary in number from four to five: when less than four are incubated, the nest is probably a second one and hurriedly constructed, the first having been tampered with. In colouring, the eggs vary much less than those of its larger relative; indeed the difference in ground-colour, is slight, varying from white to cream-colour, the markings diffused olive-brown, with underlying silver-grey or pale slate spots and overlying dots and lines of blackish-brown: some specimens have the spots large and boldly defined, especially towards the rounded extremity where they frequently form an irregular zone; sometimes the end of the egg enclosed by this zone is suffused with dirty buff; at other times the spots, though similarly disposed are small and

scattered; and, lastly, in some clutches the spots are rather small and sprinkled over the entire surface.

Although I have found few birds so easily put off the nest before the completion of the clutch, no sooner has the hen commenced incubation than she becomes a very close sitter, only leaving her eggs at the last moment, when satisfied that her death-like inaction has failed to protect them from the intruder; even then she does not move far away, but fidgets about in the scrub, scolding; in this pastime she is frequently accompanied by the male bird which is usually within earshot, and promptly appears on the scene to investigate the cause of his consort's ill temper.

The food of the Lesser Whitethroat consists of small insects and their larvæ, spiders, soft berries and small fruits, more particularly currants and cherries. Its flight is undulating. Mr. Blyth (Field Naturalist, Vol. I. p. 306) says of the "babillard or Lesser Whitethroat":—"He seems—to be always in such high spirits as not to know how to contain himself, taking frequently a long circuitous flight from tree to tree, and back again a dozen times, seemingly for no other purpose than mere exercise; but he never mounts singing into the air like the Whitethroat."

Gätke speaking of it in Heligoland, says that "Only solitary examples of this pretty little songster are met with on this island; it is the earliest arrival among its nearer relatives during the spring migration, almost always making its appearance as early as the first days of April, even if the weather is still raw, and completes its migration by the middle of May. In the autumn, when it occurs still more sparingly, it may be seen from the latter half of September till towards the end of October, and at times also somewhat later."

As a cage-bird the Lesser Whitethroat is not especially interesting; nevertheless, if its song is not particularly attractive, I agree with Herr Mathias Rausch that it has the merit of zeal (Vide 'Gefiederte Welt,' 1891, p. 342) "inasmuch as, even in confinement, it sings the whole day long." However, I have not personally had the pleasure of keeping a fully adult male of this little warbler.

In June, 1887, I came across a nest of Lesser Whitethroats, evidently only about three days old; and, so anxious was I to discover what they would be like in captivity, that I took the nest and attempted the difficult task of rearing them. With such young birds it was not only necessary to cover them up carefully with warm flannel every evening, after giving them their last meal; but I had to turn out of bed at sunrise to give them their first breakfast; no pleasant task at midsummer! I persevered, however, feeding them regularly on moistened

'Abrahams' Food' every hour, until they were old enough to require nourishment less frequently. Unhappily (as is often the case, even with the greatest care) they got very dirty: a flattened and pointed stick is a poor substitute for the parents' bill. In consequence of the matting of their feathers, the two weakest died, probably from chill; the two remaining birds were reared; but, though unnaturally fat, from lack of proper exercise, they were incessantly clamouring for food; yet they seemed healthy enough. About the third week of July, in the act of stretching forward to snatch some food which I offered, they fell dead from apoplexy: the moral of which is—do not overfeed youngsters because they cry.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE ORPHEAN WARBLER.

Sylvia Orphea, TEMM.

THE existence of this species in Great Britain rests upon the authority of a female said by a bird-stuffer, Graham, of York, to have been shot near Wetherby, and upon a young bird caught in Middlesex, kept in captivity for nearly six months and then identified by the late Mr. E. Blyth. Nests and eggs supposed to belong to this species have also been taken.

In spite of these facts, it seems to me that there is, at present, not sufficient evidence to justify the admission of the Orphean Warbler into the British list. As Mr. Seebohm remarks:—"Under the most favourable circumstances, even supposing no error to have crept into the history or identification of any of these occurrences, the Orphean Warbler can only be looked upon as a very rare and accidental straggler to our islands."

BLACKCAP & [illegible]

PLATE [illegible]

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE BLACKCAP.

Sylvia atricapilla, LINN.

THIS delightful songster is generally distributed throughout Europe, breeding in every country from Scandinavia below 66° N. lat., and extending its range southwards to North Africa, south-eastwards to Asia Minor and Palestine, and also through the Caucasus to Western Persia. In the Mediterranean basin it has been obtained at all seasons. Its winter range is supposed to extend westward to Senegal and Gambia, and eastward to Nubia and Abyssinia; in the Cape Verde Islands, Madeira, the Canaries and Azores it is apparently resident.

In Great Britain this species is somewhat local, but pretty generally distributed.

The general colouring of the upper parts of the Blackcap in breeding plumage is smoky-grey, the upper part of the head jet-black; the edges of the wing and tail feathers brownish; under parts ash-grey, paler on the chin, the centre of abdomen, axillaries and under wing-coverts white; bill dark horn brown; feet leaden grey, iris hazel. The female chiefly differs from the male in its rufous brown cap and generally somewhat browner colouring. The young male in its first plumage resembles the female, but acquires the black cap in the autumn without a moult. Both sexes of the adult birds are said to become somewhat browner after their autumn moult, but I have proved that the male retains its black cap throughout the year, a fact also attested by Mr. John Young (Vide Howard Saunders' Manual, p. 48).

Although partially resident in this country, most of the pairs which breed with us arrive from Africa about the middle of April, and leave us again in September.

The Blackcap is a bird which delights in wild dense uncultivated land, almost impenetrable thickets, tangled hedges, plantations where hawthorn bushes alternate with straggling brambles, nettles, and honeysuckle vines; even in badly kept gardens, where roses have run riot among the shrubs: in such spots it builds its neat and strongly constructed nest. In the clearings of the Kentish

woods, where the removal of the trees has permitted the wild blackberry, briony, convolvulus and many other things to sprawl over one another in profusion, rendering progression ruinous to clothing, I have often come across the nest of this bird: such clearings may either be on the outskirts or some distance within a wood. In the former case they are only separated from the main road by a hedge, or terminate in a steep bank running downwards to the thoroughfare; in the latter case, they adjoin a rough cart road cut through the wood. Little accidental clearings, entered by "blind"* keeper's paths, are also very favourite sites for the nest of this bird. The structure is very strongly built (though sometimes the walls are not very thick) and it is firmly attached to the stems of hawthorn, bramble, or other low-growing vegetation in which it is located. In form it is a neatly rounded cup, with walls externally composed of fine dry tough grass, more rarely with an admixture of straw, internally of fine grass, root-fibre and horsehair; the outside is sometimes interwoven with a little moss and always strengthened and bound to the supporting twigs by woollen thread or silk from the cocoons of some spider or caterpillar: in some nests, however, this thread is very scanty and can only be detected by carefully examining them with a lens, whereas in others it gives the outer walls a fluffy appearance to the naked eye.

The eggs vary in number from four to five; in size they are tolerably uniform, those of young birds being slightly smaller than those deposited by older individuals: in colouring they exhibit considerable variability; so much so that the tyro, unacquainted with the bird itself, its habits, or its nest, might take specimens which, by comparison with imperfect illustrations, he would perchance identify as those of the Garden Warbler, Greater Whitethroat, Spotted Flycatcher and Titlark: even the experienced birds'-nester unless aware of the different character of the structures formed by the two species might hesitate in deciding between some eggs of the Blackcap and those of the Garden Warbler. The ground-tint of the eggs is either chalky white, greenish white, pale buff, brownish buff, or flesh pink; the surface is more or less densely spotted, blotched and streaked with soft greyish olive, earth-brown, smoky brown, or (in the pink eggs) dull mahogany red, giving the egg the appearance of having been smeared with blood; above these again are sprinkled little spots and thread-like lines of black, or black-brown, often placed in the centre of a patch of the paler colouring which they serve to intensify.

The flesh-coloured variety, which somewhat vaguely resembles the egg of the Spotted Flycatcher, is rare; the only two nests purely of this type which I ever

* That is to say, long disused and overgrown with moss and weeds.

obtained, were probably the produce of the same pair of birds in succeeding years; the two nests being situated near the top of the same rough hedge outside a small wood at Tunstall, in Kent; the first I took on the 24th May, 1877, the second on the 29th May, 1878: those of the later clutch are slightly larger and less pyriform than those of the previous year. Another variety, almost equally rare, has the ground-tint brownish buff, so densely mottled and blotched with brownish russet that, but for its minute black markings, it might almost be mistaken for some eggs of the Tree-Pipit.

Both sexes incubate, but the male bird is more frequently seen on the nest than the female; it is therefore probable that, as in the case of Doves, the hen sleeps on the nest and gives up her place to the cock, for day-duty, after he has finished his breakfast, only returning from time to time to enable him to feed.

The nest of the Blackcap is not only built about a fortnight earlier than that of the Garden Warbler; but, even when not tenanted, may be recognized as distinct from it, by its smaller, neater, and far more compact character; the eggs also are frequently slightly smaller, and, even when somewhat like those of *C. hortensis*, differ in the greater prominence of the small black markings on their surface.

The food of this species consists of insects and their larvæ, spiders, centipedes, small fruits and berries, more especially elder- and service-berries, though those of the ivy are also eaten by it; the young are, however, principally fed upon small caterpillars. Although, on the Continent, it is said to feed upon ripe figs, my experience of it in confinement is, that it will not touch dry figs when cut open and placed with the soft food, but red or white currants it devours with avidity.

Next to the Nightingale, the Blackcap is certainly our finest songster, and its powers of mimicry as well as its ventriloquial gifts are superior to those of that most charming of all feathered vocalists; its song is at one time full, rich and clear as that of a Blackbird, then soft and mellow, again brilliant and plaintive as a Robin's notes, or rapid and almost shrill as those of a Wren; it can copy deceptively the notes of many birds, even some portions of the Nightingale's song, but it is almost too loud in its utterances to produce the latter in its purity. Among foreign songsters the only bird which reminds one somewhat of our Blackcap is the so-called "Pekin Nightingale" *(Liothrix luteus)*, a bird evidently far more nearly related to our Hedge Accentor.

The song of the Blackcap may be heard from the highest branches of a lofty tree, from a low shrub, or even from the nest as it sits; but after the young are hatched it ceases, the duty of finding food for its babes occupying the bird's

whole attention. When frightened this species scolds somewhat after the fashion of a Whitethroat, and, if flushed from its nest, it remains close by hissing angrily; its call-note is said to be a repetition of the word *tac* or *tec* harshly uttered; but it may be questioned whether this is really the call to its mate; it seems more probable that it is merely a querulous observation, such as many of these Warblers indulge in at the approach of man: I am satisfied that its call is a soft whistle.

In the autumn of 1894, I purchased a male Blackcap, which was procured for me by Mr. E. P. Staines, who kindly took the trouble to "meat it off"* for me. I turned it out into the same aviary with my Redstart and Wagtails, where it soon made itself at home; it used generally to roost upon a nail which had been driven into the wall, in the first instance, to support a log-nest. This bird in due course became fairly tame; it was tolerably quick at seizing spiders or mealworms and even earwigs, when these were thrown into the aviary. In the spring it began to record its song on one or two occasions, but I never heard it sing out. Eventually a Rosa's Parrakeet bit one of its wings through, and a week later it died.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE GARDEN WARBLER.

Sylvia hortensis, BECHST.

MORE delicate than the Blackcap, the Garden Warbler does not arrive in this country until early in May, and towards the end of September it departs on its autumn migration. This species breeds locally throughout Europe, from about 70° N. in Norway, and 65° N. in Finland and Russia, to the

* A term applied to the process by which a wild-caught bird is induced to feed upon a soft mixture. Many aviculturists make the mistake of using finely chopped raw meat mixed with bread-crumbs for this purpose, hence the term has arisen.

GARDEN WARBLER ♂ ♀

PLATE 19.

shores of the Mediterranean, but it does not appear to winter in Europe; it is not known to breed in Sicily or Greece, but Canon Tristram states that it does so in Palestine; eastwards its range extends to lat. 59° in the Ural Mountains: its migration extends through Asia Minor and Egypt to the Sahara, Damaraland, the Transvaal and to the east of Cape Colony.

Generally but very locally distributed over the greater part of England, but not recorded as breeding beyond Pembrokeshire and Breconshire in Wales, or in the western part of Cornwall; probably pretty generally distributed in Scotland, although this has been questioned; it has nevertheless been seen in most of the midland and southern counties from Banffshire downwards. In Ireland the Garden Warbler is both local and rare, but it has been recorded from Antrim, Fermanagh, Dublin, Wicklow, Tipperary and Cork.

Gätke states that the Garden Warbler though quite common at Heligoland during both spring and autumn migrations, is less numerously represented than the Whitethroat.

The Garden Warbler in breeding plumage is olive-brown above, the wings and tail slightly darker, the flight feathers with narrow pale margins; a slightly paler streak over the eyes; under parts dull buffish white, purer on the belly, browner on the breast, flanks and centre of under tail-coverts. Bill deep brown, base of lower mandible paler, feet leaden grey, iris hazel, eyelid white. The female is very like the male but is slightly paler and probably has a somewhat broader head, but of this I am not certain. After the autumn moult the adult birds become more olive above and more buff-coloured below. Young birds resemble their parents in winter plumage, but their secondaries have well-marked pale margins. The breeding season extends from the end of May to about the end of July.

I have found this species breeding in considerable numbers in North Kent, occupying the same localities as the Blackcap, which was also fairly abundant; I am therefore not prepared to endorse Seebohm's statement that "where the Garden Warbler is abundant the Blackcap seems always to be rare, and *vice versa*." In one sense, indeed, they do not breed together; the Garden Warbler begins to build about a fortnight or three weeks later than the Blackcap, and by the time her first egg is deposited the earlier bird is hatching out or rearing her family. Although often heard in the woods, this species is less frequently seen there than either the Nightingale or Blackcap; it is a shy skulking little bird frequenting the densest cover, the outskirts of woods where the undergrowth is thick and tangled, also the so-called "shaws and shaves" of Kent, almost impenetrable copses and plantations, well-timbered gardens, nurseries, and shrubberies; the

fact that the Garden Warbler can be better recognized in the generally wider open spaces of the last mentioned haunts, having doubtless earned it the name of *hortensis*.

The nest of this bird is usually situated in tangled blackberry, or low bushes, in copses or shrubberies; but in kitchen gardens it may sometimes be seen in gooseberry bushes, or among well-covered pea-sticks: amongst the undergrowth in small woods and thickets it is by no means a rare object at the end of May or early in June; though, of course, less common than that of the Whitethroat: I have never found it at any great altitude, usually about two or three feet above the ground. The structure of the nest is externally somewhat looser and more slovenly than that of the Blackcap, but the cup is beautifully formed within; the outer walls are formed of dry bents, or goose-grass and other fibrous plants; sometimes mixed with a little moss and wool and lined with fine roots and horse-hair. The eggs vary in number from four to five and are tolerably constant in their colouring; they are generally creamy, but sometimes pale greenish white, blotched and spotted with pale greyish olive or rufous brownish, with sometimes a few underlying spots of pearl grey, and a few blackish brown surface spots or hair-lines; some examples are very faintly marked, with all the markings sinuous but arranged longitudinally and covering the whole surface, others have somewhat bolder nebulous patches of spots chiefly confined to the larger end, in others most of the markings run together into a vague smoky cap at the larger end, leaving the remainder of the egg almost white; but the general effect of a crowd of Garden Warbler's eggs impresses one with the conviction that they are extremely uniform in tone: some clutches contain small eggs, others large, according to the age of the parents; their average size is about the same as those of the Blackcap; but the latter bird sometimes lays a much shorter and rounder egg than I have ever found in a Garden Warbler's nest.

The Garden Warbler sits somewhat closer than the Blackcap, only slipping off her eggs at the last moment and then diving down over the edge of the nest, so close to your hand that her wing will sometimes brush your fingers; there is therefore no difficulty, apart from the different character of the nest, in making certain of the identity of any eggs which you take yourself, and there is only one variety of the Blackcap's eggs which could by any chance be mistaken for the product of *Sylvia hortensis*.

The song of the Garden Warbler is exceedingly pleasing, less rich and full than that of the Blackcap; somewhat more plaintive, though rapidly enunciated; in tone reminding one a little of an extra good Canary, yet without the shrieking notes which frequently mar the song of that bird. Excepting when rearing its

young, this species sings frequently throughout the day, but whether it sings again after the rearing of its single brood (I do not believe in the double-broodedness of this bird) I cannot say; probably not: all I can positively state is that I have never heard it even as late as July, a month in which, occasionally, a late nest may be taken.

The food of *S. hortensis* in the spring and summer consists very largely of spiders, insects and their larvæ, the caterpillars of the two smaller cabbage butterflies *(Ganoris rapæ* and *G. napi)* being favourite articles of diet and largely used for feeding the nestlings.* In the summer, however, currants and strawberries are not despised by the Garden Warbler, while in the autumn fruits and berries seem to become its favourite food.

The alarm note of the Garden Warbler is a kind of *check*, *check*, sometimes followed by a guttural sound. Speaking of the Garden Warbler, Stevenson observes:—"I have rarely detected the song of this warbler in summer in close vicinity to the city, but in autumn, towards the end of August or beginning of September, a pair or two, with their little families (and the same may be said of the Blackcap and Whitethroat) invariably appear amongst the shrubs in my garden, betraying their presence by the same anxious cries so aptly described by Mr. Blyth, as 'resembling the sound produced by tapping two small pebbles together.' This is evidently intended as a note of warning to the young brood, always carefully concealed amongst the thick foliage, their whereabouts being indicated only by a rapid movement of the leaves, as they search the branches for berries and insects."

The call of the Garden Warbler to its mate is certain to be a soft sound; but I have not specially noted it; and, in all works on British Birds which I have studied the cry of alarm or warning is incorrectly stated to be the call-note: the same error is made with regard to many other species, not only of European but of foreign birds; the harsh scolding chatter of the Pekin Nightingale having been stated to be its call note, probably because both sexes scold in unison: whereas the actual call of that species consists, in the hen—of a single whistled note repeated five times, and in the cock—of a short measured song consisting of seven or nine notes.

The Garden Warbler in confinement is certainly more sensitive to cold than the Blackcap: a friend of mine who is very fond of fishing, sometimes takes a fine net with him which he fixes up across the trout stream; by this means he

* These larvæ are eaten with avidity by all insectivorous birds; whereas the caterpillars of the large cabbage butterfly *(G. Brassicæ)* seem to be offensive to nearly all. Why this should be the case, when one sees that all three caterpillars eat the same leaves, and produce very similar butterflies (which are eaten indiscriminately) is a poser.

has, from time to time, secured many interesting birds for stuffing (a proceeding with which I have no sympathy, for to my mind a live bird in the bush is far preferable to fifty dead birds in the hand). However, in September, 1888, he brought me two living birds, one of which was a male Garden Warbler. I turned these birds into a large cool aviary, among Waxbills, Mannikins and British Finches. The Garden Warbler seemed perfectly content, ate the usual soft food, as well as a few mealworms, caterpillars and spiders; the frost did not appear to affect it unpleasantly, and, in the early spring, it sang heartily every day: in May its song became less frequent, it grew somewhat listless in its movements, yet continued to eat as freely as ever. One morning, in July, 1889, I found it dead, and dissection showed that its lungs were seriously affected. I should therefore recommend Aviculturists to keep this Warbler in a mild temperature during the winter months, and give it as much insect food as possible: it ought, moreover, to be kept in an aviary, so that it may be able to take plenty of healthful exercise.*

As an aviary bird, the Garden Warbler is well worth keeping; it is active and at the same time capable of being tamed, although somewhat more shy than the Blackcap; its song, though inferior to that of the latter species, is infinitely superior to that of any of the British Finches, yet that is not saying much for it, inasmuch as even the Robin's plaintive little melody is purer in tone and more grateful to the ear than that of any of our Finches.

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* Mr. Staines, of Penge, gave me a second male in July, 1896, which was in perfect health at the time of penning this article.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE BARRED WARBLER.

Sylvia nisoria, BECHST.

RESPECTING the distribution of this rare species, Seebohm writes:—"Besides South Sweden, it breeds in Germany east of the Rhine, Transylvania, South Russia, Persia, and Turkestan, as far east as Kashgar. It passes through South-eastern France, Italy, Turkey, Greece, Asia Minor, and North-east Africa, as it is said to pass through Nubia in spring and autumn, but has not been recorded from the Transvaal. Its alleged occurrence in China is probably an instance of mistaken identification."

The same author, writing in 1883, observes that "The only claim of the Barred Warbler to be considered a British bird rests upon a single example, shot more than forty years ago near Cambridge—but apparently not brought under the notice of Ornithologists until March, 1879, when Prof. Newton exhibited it at a meeting of the Zoological Society of London, a record of which may be found in the Proceedings for that year, page 219."

The record referred to by Mr. Seebohm runs as follows:—"This specimen was formerly the property of Mr. Germany, for many years the highly-respected porter of Queen's College, who in the course of a long life formed a considerable collection of birds, nearly all obtained by himself in and near Cambridge, and also stuffed by himself. At his death, more than twenty years ago, it passed, with many others of his specimens, into the possession of an old friend of his, Mr. Elijah Tarrant, of whom Mr. John Robinson, an undergraduate of Trinity Hall, bought it about a twelvemonth since. Up to this time no one seems to have known what the bird was, though some ingenious person had hazarded the suggestion that it was a variety of the Nightingale. Soon after it was seen by Mr. Frederick Bond, F.Z.S., who at once recognized it as *Sylvia nisoria*, and was good enough to advise its being shown to me."

Prof. Newton then proceeds to point out good and sufficient reasons for believing that this specimen actually was obtained in England. Apparently it was shot either in spring or early summer: it was skulking in dense foliage and was only shot with the greatest difficulty and then at so short a range that a

good many of its feathers were knocked out. *The taxidermist who stuffed it inserted a glass eye with a pale yellow iris, a clear proof that he must have seen the bird very soon after it was shot; otherwise it is not probable that he would have selected a colour which is rare in the family.

Had the occurrence of this single example been the sole argument in favour of regarding the Barred Warbler as British, I should have treated the species as a mere chance visitor to our islands, and practically ignored it; but singularly enough, on the very year after the publication of Mr. Seebohm's observation, three specimens were brought to the notice of Zoologists: the first of these, a young bird, was shot on August 16th, 1884, near Broadford, in the Isle of Skye, by Mr. G. D. Lees; the second, an immature female, on the 28th of the same month, by the Rev. H. H. Slater, who observed it skulking in an elder-hedge by a potato-garden in some sand hills on the Yorkshire coast, he stated that the bird was very shy and difficult to see; the third, another immature female, was shot by Mr. F. D. Power, of Brixton, on the 4th of September, from scrub at the base of Blakeney sandhills, Norfolk. The occurrence of three young examples in one year, almost seems to justify the conclusion that this Warbler, when on migration, may frequently visit us; but, owing to its disinclination to show itself in the open, may have evaded observation.

In the last edition of Stevenson's "Birds of Norfolk," edited by Thos. Southwell, a member of the British Ornithologists' Union, the latter gentleman speaks of an example of the Barred Warbler as having been shot at Blakeney after easterly winds on the 10th September, 1888, and he says that this bird on dissection proved to be a male. The contents of the stomach consisted largely of earwigs.

This would appear to be distinctly a fifth occurrence of the Barred Warbler upon the British coasts: scrub in the vicinity of sandhills seems to be the most likely haunt in which to seek the species, whilst August and September are the months most favourable for the search; but it seems a thousand pities that these rare birds should not be captured alive, and their habits in captivity studied in detail. All that can be learnt from the stuffed skin of a Barred Warbler has either long been known, or can be equally well studied from skins already in our cabinets; but really to know something of the nature and peculiarities of a bird, it must be studied, not only flying freely in its native home, but in a good-sized aviary. Lord Lilford has set an example which might, with advantage to Ornithological science, be well followed by many other naturalists, and especially those with means and leisure.

When on migration the Barred Warbler reaches Heligoland in May and June,

* This specimen is still in the possession of Mr. Robinson, who resides at Elterwater, Westmoreland.

but Gätke speaks of it as by far the rarest of those belonging to Germany which are met with on that island; he says:—"The bird is never seen before the middle of May, and then only on warm, calm days, and in solitary instances; nor can it be by any means reckoned as a regular annual summer visitant."

The adult male in breeding plumage is smoky-grey above, the head, rump, upper tail-coverts and tail-feathers greyer; the wings browner; the wing-coverts, innermost secondaries, the feathers on the rump, the upper tail-coverts and the outer tail-feathers are margined and tipped with white, and have a blackish subterminal bar; this is also sometimes the case with the forehead, lower back, and scapulars; the two central tail-feathers are indistinctly barred; under surface greyish white, barred with grey, the breast, flanks, thighs, and under tail-coverts browner, the flanks somewhat heavily barred; axillaries and under wing-coverts mottled with grey and white, bill dark brown, the lower mandible paler at the base, feet greyish brown, iris pale yellow. The female is very like the male, but slightly browner and with fewer transverse bars. In the autumn the colouring becomes browner and the bars on the feathers more pronounced. Young birds are browner than adults and are hardly barred at all excepting on the under tail-coverts.

Although not unlike the Whitethroat in its habits and even in its song, the Barred Warbler is far more shy and skulking, rarely leaving the dense cover of briar and brushwood; though not frequently met with in forests, it haunts plantations, copses, and tangled masses of thorn and blackberry, and from such retreats its song may be heard: this, though harsh in some of its notes, is said to be almost equal to that of the Garden Warbler and to include tones rich as those of the Blackcap,

The call-note is described as resembling the syllable *chek;* and the alarm note *r-r-r-r-r*, a harsh, warning cry.

The food of the Barred Warbler does not materially differ from that of most other species of *Sylvia;* it consists largely of insects, with the addition of fruit and berries as soon as these are ripe; it sometimes captures winged insects in the air after the manner of its congeners.

The nest is usually placed in a thorn-bush in thick cover, and as a rule very low down; but one instance is recorded of its being built among the topmost twigs of a birch-tree at a height of twenty-five feet above the ground. It is a firmly built and somewhat bulky structure, roughly formed externally of bents and roots intermingled with plant stalks and compacted with spiders' cocoons or vegetable down; the inside is neatly formed, deep and beautifully rounded, the lining consisting of fine rootlets, horsehairs, and sometimes cobwebs.

The eggs vary from four to six in number, but five is the usual clutch: they are dull buffish white marbled with grey, and are not unlike those of the Grey Wagtail, excepting that they are larger; sometimes, however, they are marbled with brown with underlying grey spots; the colouring being massed especially on the larger end.

Speaking of the song of this species, Herr Mathias Rausch, in the "Gefiederte Welt," for July 30th, 1891, observes that "it is just as beautiful and rich in charming melodies as that of the Garden Warbler, for the most part flute-like and full-toned, frequently indeed intermixed with somewhat rough guttural sounds, yet withal distinctly powerful and also more or less intermingled with snatches from the song of other birds. Also the song of this bird has a swing peculiar to it, which characterizes the species as an original songster."

"Moreover if reared by hand or trapped when young, Barred Warblers, taught by good cage-birds, certainly often become admirable imitators of the song of other birds; but, in the case of old wild-caught examples, this faculty is much less perceptible, and for this reason it is hardly fair to reckon them plagiarists."

Lord Lilford (Coloured figures of Birds of the British Islands) evidently has not so high an opinion of the Barred Warbler's vocal attainments; he says:—"I have three of this species caged at this time of writing; in attitude, song, and general demeanour they very much resemble our Lesser Whitethroat, but are the least restless of any Warblers that I have ever kept in captivity." An adult which lived for some months in the possession of Rev. H. A. Macpherson was a very shy but active bird.

Dresser, in his "Birds of Europe," says:—"It is never seen sitting still, but appears always moving about. If disturbed, or it sees anything strange, it raises the feathers of its head, jerks its tail, and utters a harsh note. It creeps about amongst the bushes, hopping about from twig to twig without using its wings. It is quarrelsome, and drives intruders from the vicinity of its nest."

"It sings from early in the morning, except during the heat of the day, until late in the evening, and frequently sings when at some height in the air or fluttering from tree to tree."

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE DARTFORD WARBLER.

Sylvia undata, BODD.

ALTHOUGH this Warbler has been known to breed in Kent, I have never been able to be certain of having seen it, though I have sometimes suspected that nests which I have discovered built in furze-bushes, might have been the work of this species: whoever the architect was, she slipped away so quietly into the dense, prickly cover on my approach, that I could not even get a glimpse of her, and only knew of her whereabouts by the movement in the furze.

Howard Saunders gives the following as the geographical distribution of this species:—"Although as a rule a non-migratory species, the Dartford Warbler has been observed in Heligoland; but it is unknown in Northern Germany, Holland, or Belgium. Rather rare in the Channel Islands, it is found throughout France in suitable localities, especially from the foot of the Western Pyrenees to Provence. In many parts of Portugal and Spain it is common, and I have watched it singing among the orange-gardens of Murcia; while it nests in the sierras of the almost tropical south coast at elevations of from 4,000 to 3,000 feet. In Morocco and Algeria it is also resident, and it has been recorded from Lower Egypt, and Palestine; but in Europe its eastern range is not known to extend beyond Italy and Sicily, the bird seldom reaching Malta."

With regard to its distribution in Great Britain, this author says:—"It is now known to breed in nearly all the southern counties, from Cornwall to Kent, especially in Hampshire (including the Isle of Wight), Surrey and Sussex; sparingly in the valley of the Thames; perhaps in some of the Midland Counties; and, on the sole authority of Mr. C. Dixon, in the Rivelin valley, in the extreme south of Yorkshire. It has been observed in Cambridgeshire and Norfolk; while in Suffolk a few probably breed."

Respecting its occurrence in Heligoland, Gätke says that only two instances are recorded, "it having on one occasion been obtained by Reyners, and on the other observed by myself, on May 31st, 1851, hopping about in the thorn-hedge of a neighbouring garden at only a few paces distant. Unfortunately there being

other gardens behind the hedge in question in which people were occupied at the time, I was unable to shoot the bird."

The adult male above is dark smoky brown, deeper and more slate-coloured on the head, wings dark brown, the coverts, inner secondaries, and primaries with pale brown outer margins; tail dark grey, the two outside feathers with white outer margins and tips; under surface chestnut reddish, shading into white at the centre of lower breast and abdomen; under tail-coverts greyish; bill deep horn brown, base of lower mandible yellowish; feet pale brown, iris and eyelid saffron yellow. The female is smaller than the male and the underparts are paler. After the autumn moult the chin, throat, breast and flanks are spotted and streaked with white; birds of the year are paler above and whiter below than the female.

The Dartford Warbler is an extremely restless, but at the same time a skulking bird; Seebohm's description of its habits can, I think, hardly be improved on; he says:—"In summer the Dartford Warbler lives almost entirely in the furze-bushes; hence its local name of Furze-Wren. In winter, though it may often be seen in its summer haunts, the necessity of procuring food prompts it to visit the turnip-fields, or to range along the coast. Its long tail and short rounded wings do not seem adapted to extensive flights; but it has nevertheless been twice seen on Heligoland. It is seldom seen on the wing. At Biarritz I found them frequenting the reeds on the banks of a small lake. The first sight I had of one was that of a little dark bird with a fan-like tail suddenly appearing amongst the reeds on the opposite side. Occasionally, as we walked on the bank of the lake, we heard a loud, clear, melodious *pitch'-oo* repeated once or twice amongst the reeds. The note was so musical that for a moment one might imagine that a Nightingale was beginning to strike up a tune. Now and then we saw the bird appear for a moment above the reeds, as if thrown up by a battledore; but it dropped down again and disappeared as suddenly. I have very rarely seen so skulking a bird; once only it flew up from the reeds, and perched in a willow near a large patch of furze-bushes. Like most other Warblers this bird is very active, scarcely resting for a moment, excepting when warbling its hurried little song from the top of a furze-branch. In many of its habits it reminds one of Cetti's Warbler. It flits up a furze-bush, dodging in and out amongst the side branches in search of insects, perches for a moment on the topmost spray; but before you have had time to get your binocular on to it, it has caught sight of your movement and drops down into the furze-bush as if shot."

The nest in Great Britain has always been found concealed amongst dense furze, but on the Continent and more especially in the south it is said to be placed in broom or heather; the dead lower branches of the furze are selected as

a building site. In character the nest is small, deep and flimsy; it is formed principally of thin bents, interwoven with stems of goosegrass and moss, a little green furze, and wool.

The eggs vary from four to five and are greenish or buffish white, mottled with olive and spotted with reddish brown; the marking is more densely distributed over the surface than in eggs of the Greater Whitethroat, to which in other respects they bear a slight resemblance; they, however, tend to be longer, and to my mind would be more aptly likened to very diminutive eggs of the Rock Pipit, or to some eggs of the Tree Sparrow. I do not think anyone well acquainted with British Birds' eggs would ever confound those of the Dartford Warbler and Whitethroat.

The breeding-season of this species is from April to July, and two broods are reared in the year; the second nest is said to be usually less compact than the earlier one; this is constructed in June, when there is less necessity for a warm receptacle for the eggs.

The food of the Dartford Warbler consists principally of insects, and Mr. Booth, in the "Zoologist," for 1887, states that it "generally feeds its young on the body of a large yellow moth," which he says the parent birds hunted for among the lower part of the stems of the foliage. I have little doubt the moth intended is one of the common Yellow-underwings *(Triphœna ianthina, orbona,* or *pronuba)* which I have frequently disturbed from furze-bushes in the day-time. In the autumn wild berries are also eaten.

As this species is a fairly meritorious songster there is no doubt that it would be an interesting aviary pet; its scolding note is a somewhat harsh *cha-cha,* but its call-note is probably soft and pleasing like that of other Warblers. Its actions are sprightly, the tail being expanded as it alights; its flight is rapid and undulating, but not powerful.

There is not the least doubt that this species could be fed in confinement upon the mixture which I have recommended for other insectivorous birds, supplemented by mealworms, caterpillars, moths, flies, cockroaches, earwigs, and spiders; these last, which are rarely mentioned in works on British Ornithology, form a considerable portion of the diet of all insectivorous birds; they are not only easy to capture, easy of digestion (even seeming to have a beneficial effect upon birds when out of health) but they are relished much more than any form of insect or its larvæ, not excluding mealworms: centipedes also are eaten with avidity, but not millipedes, and many birds refuse to touch woodlice or only kill and leave them.

The Dartford Warblers which Montagu kept in confinement were taken from

the nest and reared by hand. These birds "began to sing with the appearance of their first mature feathers, and continued in song all the month of October."

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE GOLDEN-CRESTED WREN.

Regulus cristatus, K. L. KOCH.

PERHAPS to the case of few species are the observations of Herr Gätke more applicable than to that of the Gold-crest when he says, speaking of the countless myriads of birds which pass over Heligoland on migration, and furthermore of this very species:—"The east-to-west migration of the Golden-crested Wren in October, 1882, extended in one continuous column, not only across the east coast of England and Scotland, but even up to the Faroe Islands. When one thinks of numbers of individuals such as these, which cannot be grasped by human intelligence, it seems absurd to talk of a conceivable diminution in the number of birds being effected through the agency of man. In one particular respect man no doubt does exert a noticeable influence on the numbers of bird-life, not, however, by means of net and gun, but rather by the increasing cultivation of the soil, which roots out every bush and shrub, great or small, as a useless obstacle, and thus robs the bird of even the last natural protection of its nest. Having thus driven the poor creatures into distant and less densely populated districts, we complain that we no longer hear their merry song, unconscious of the fact that we are ourselves responsible for the cause."

This is a point which I have always insisted upon: no Act for the protection of wild birds, which does not forbid the wholesale grubbing of woods, and so-called "waste land," will ever prevent the diminution of bird-life in our Islands.

The Gold-crest is generally distributed over Europe in Scandinavia northward to the Arctic Circle, and in Russia from Archangel and the Ural Mountains; in

GOLDEN-CRESTED WREN ♂

PLATE 22.

the east, southwards to the Himalayas and China, and in the west down to the Mediterranean.

Dixon (Jottings about Birds, p. 70) observes:—"It is said that the Gold-crest, *R. cristatus* (Koch) visits Algeria in winter, but I cannot find any conclusive evidence of the fact. It is said regularly to pass Malta on migration in spring and autumn."

In Great Britain it is generally distributed wherever coniferous trees occur, and breeds with us.

Although the Gold-crest is the smallest British bird, its migratory powers are inferior to none, and its capacity for resisting cold so great, that it remains with us even in our severest winters: it is a common error to suppose that size necessarily accompanies vigour, inasmuch as many of the tiniest birds are undoubtedly far more hardy than larger species: as an instance, I would call attention to the little Indian Avadavat, which I have proved to be indifferent to 21 degrees of frost; whereas many of the larger parrots, at anyrate if recently imported, as some of my Waxbills had been, would have succumbed to a considerably higher temperature.

The male Gold-crest is olive-green above, more or less suffused with yellowish; the crown of the head bright yellow in front shading into orange behind and bounded by a blackish streak, below which is a greyish-white superciliary streak; the wing and tail-feathers are greyish brown, the median and greater wing-coverts edged with white, the primary-coverts being blackish; secondaries tipped with white; under parts pale greyish-brown or greenish-buff, whiter on the abdomen; bill blackish-brown, feet brown, iris hazel.

The female is less brightly coloured than the male, the crown brown-yellow with narrower blackish streak. In the young the crown is slightly darker than the back, but shows no trace of yellow or black.

In many illustrations this bird is represented with a well-defined crest; but, so far as I have seen, the feathers of the crown seem to be erected very slightly, if at all; though, when the little creature looks downwards, the feathers at the back of the crown project slightly above those of the nape. Possibly under great excitement the feathers of the crown would be partially raised as they are in many birds; but whether, even then, they would stick up like the quills of the "prickly porcupine," as artists delight in representing them as doing, is, I think questionable.

Mr. Frohawk, who has had considerable experience of the Gold-crest, tells me that in the autumn this species may frequently be met with singly, or in pairs (I have often seen it thus in my own garden); but in the winter it is generally

seen in flocks, and often in company of Long-tailed Tits. In the latter season it haunts pine-forests, as well as hedges; but in the breeding season plantations of spruce and larch are its favourite resorts. The male sings continuously in the vicinity of its nest, and if disturbed the old birds creep about incessantly near to their home with quivering wings.

Furthermore, Mr. Frohawk says that he has never known a Gold-crest to erect a crest; the feathers of the head are, however, somewhat expanded laterally so as to expose the golden stripe in its full beauty, this stripe being very narrow when the bird is in repose. Mr. Staines, of Penge, who has on several occasions attempted to keep the Gold-crest as a cage-bird, confirms Mr. Frohawk's opinion in all particulars: he has never seen the bird erect, though he has seen it expand its crest.

Lord Lilford (Birds of Northamptonshire) says:—"The call-note of the Gold-crest is peculiar and constantly repeated whilst the birds are on their excursions. In very cold weather I have found a family of perhaps a dozen of these little birds clustered together for warmth beneath the snow-laden bough of an old yew-tree, to the under surface of which the uppermost birds were clinging by their feet, whilst, as far as I could see, the others clung to them and to one another, so as to form a closely packed feathery ball. I happened to notice this by chance, and, in the gloom of the overhanging boughs, thought it was an old nest, but on touching it with the end of a walking-stick, the supposed nest dissolved itself into a number of these minute creatures, who did not appear much alarmed, but dispersed themselves on the adjoining boughs, and, no doubt, soon resumed their previous formation, which I was sorry to have disturbed. Although the nests of the Gold-crest are generally placed under the branches of a yew or a fir tree, we have twice found them in a thin fence at about five feet from the ground; the materials are soft moss and lichens, wool, a little grass, and a mass of small feathers by way of lining.* The eggs are of a yellowish-white, very closely spotted or clouded with pale rust-colour, and vary in number from six or seven to ten or more; I once found twelve in a nest."

A nest in my collection, taken from the under-surface of a yew-branch and interlaced in the terminal feathery leaves, is formed almost entirely of moss, compacted with spiders' silk and one or two small feathers; the lining appears to

* Mr. A. T. Mitchell has drawn attention to the fact that, in some parts of Ireland, the Gold-crest "builds commonly against the sides of ivy-covered trees. The nest is not suspended under a branch of fir, as I have found it in England, and the nests here are badly and loosely put together." Mr. J. Trumbull states that of seventeen nests of the Gold-crest found in Co. Dublin, only four were placed beneath the surface of a branch. Mr. H. S. Davenport has found half a dozen nests of the Gold-crest "placed against the sides of ivy-clad trees." The Rev. H. A. Macpherson has also pointed out that the Gold-crest occasionally builds its nest in the middle of a furze-bush (Cf. Zool. 1895, pp. 385, 431, 448).

consist wholly of small soft feathers. Some eggs which I have seen, were creamy white; others, densely and minutely dusted all over with rusty-reddish; others again, with a deeper rust-red zone, or terminal nebula, at the larger extremity.

The song of the Gold-crest is short, low, but pleasing; though its call-notes are thin and almost as shrill as the notes of a bat. Dixon in describing the song calls it eulogistically "a few notes of matchless melody."

This tiny bird haunts woods, shrubberies, plantations of fir, larch and other conifers, yew-trees in churchyards and cemeteries, copses, orchards and gardens. In its habits it greatly resembles the Tits, dropping from spray to twig, turning, twisting, closely examining every inch of its swaying perch for insect prey, and incessantly uttering its high piercing whistle; then, gliding rapidly from the end of some feathery spray, it passes on to another tree and recommences its acrobatic performances. Like the Tits also, this little bird is wonderfully confiding: one autumn whilst standing on a balcony leading by steps into the garden of the house which I then inhabited, I heard the shrill note of this species just above my head, and looking upwards saw a pair of Gold-crests clambering about over a jasmine which I had trained to cover a wire arch above the doorway; they appeared to be quite indifferent to my presence not a foot below them.

Stevenson, in his "Birds of Norfolk," after speaking of the well ascertained fact that thousands of these tiny birds in the autumn come to swell the numbers of our residents, observes:—"Perhaps the most striking instance, however, of the migration of the Gold-crest, in large numbers, to our eastern coast, was witnessed by Captain Longe, of Great Yarmouth, on the morning of the 2nd of November, 1862. In a letter to myself at the time, he says 'As I was walking to Hemsby, about 7-30 when it was just daylight, about half a mile out of Yarmouth, on the Caister road, my attention was attracted to a small bush overhanging the marsh dyke, which borders the pathway, by the continuous twittering of a small bird. On looking closely, I found the bush, small as it was, literally covered with Golden-crested Wrens. There was hardly an inch of twig that had not a bird on it, and even from my rough attempt at calculation at the time, I feel sure there were at least between two and three hundred. Most of them were either females or young birds, having a lemon-coloured crest; they were perfectly tame, and although I sat down on the other side of the ditch, within six feet, and watched them for some time, they did not attempt to fly away; but one or more would occasionally rise off its perch, hover like a butterfly, and settle again in some other position. I went the next morning to look for them, but they were all gone. The wind had been easterly, with much fog.'"

The food of the Gold-crest consists principally of insects, small spiders, &c.;

but it eats a few seeds and small berries: in captivity insectivorous food and bread-crumbs moistened, also boiled potato, cooked the previous day, and finely chopped up with yolk of egg, would form a good staple diet; small mealworms, ants' larvæ, small caterpillars, flies, and spiders being given when procurable.

Although sometimes kept in quite small cages, this bird, to be properly studied, should be turned loose in a moderately large aviary, planted with firs and yews; or at any rate with a few pot specimens of these trees standing about; but whether it be kept in cage or aviary, a snugly lined box should be hung up in one corner to which it may retire for warmth at night; for, although the Gold-crest is undoubtedly a hardy bird like the Tits, captivity at best deprives it of much of the free exercise which it takes throughout the day when at liberty; this, in conjunction with somewhat unnatural diet, less pure air, and the lack of companionship of any of its own species, doubtless tend to weaken and undermine the constitution of this feathered mite.

In my opinion a bird which is never seen singly, but at the very least in pairs, should not be caged by itself; solitary confinement may not be objectionable to a parrot; but to a species which, when not breeding, is seen in family parties, small companies, or even in countless myriads, solitary confinement must be in the highest degree irksome: an aviary about eight feet square, devoted to a score or so of these fairy-like little birds, would be "a thing of beauty and a joy for ever."

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE FIRE-CRESTED WREN.

Regulus ignicapillus, C. L. BREHM.

A NOT infrequent straggler to the British Isles, the Fire-crest may fully claim its title to a place in these pages. Of its geographical distribution Howard Saunders writes:—"The Fire-crested Wren has a much less

FIRE-CRESTED WREN ♂

PLATE 23.

extended range northward than its congener, and although it appears to have straggled to the Faroes, it is unknown in Scandinavia; barely reaches Denmark; and does not occur to the north-east of the Baltic Provinces of Germany. To some parts of the Rhine district it is rather partial in summer; and, although local in its distribution, it breeds in France, Spain, Italy, Switzerland, Central and Southern Germany, Greece, Turkey, and Southern Russia. In the Taurus Range of Asia Minor, it is more abundant than the Gold-crest. In the mountain forests of Algeria, and in some parts of Southern Europe, the Fire-crest is resident throughout the year; its numbers being augmented in the winter by migrants from the north."

Herr Gätke says:—"This species is a little smaller, and by reason of its black eye-streak, still somewhat more prettily marked bird than the preceding. It visits Heligoland almost as regularly as the latter, but invariably in very small numbers. In the spring it arrives somewhat sooner, and in the autumn somewhat later than *R. flavicapillus*—and thus may be said in a sense to open and close the migration of the crested Wrens."

In England specimens of the Fire-crest have been obtained since 1832, when a cat slaughtered the first recognized specimen; the following counties have at various times witnessed its destruction:—Cumberland, Durham, Yorkshire, Lancashire, N. Wales, Norfolk, Sussex, Kent, Hampshire, the Isle of Wight, Devonshire, Oxon, Cornwall, and the Scilly Islands. One specimen is said to have occurred in Scotland in 1848, and one was supposed to have been seen at Tralee, in Ireland; but both of these occurrences are considered to be open to doubt.

In general appearance the Fire-crest greatly resembles the Gold-crest, but differs in its yellowish frontal band, whiter superciliary streak, frequently more orange crown, a second black streak passing from the gape through the eye, and a third moustachial streak; the sides of neck and the shoulders washed with sulphur yellow; feathers of wings and tail brown, with yellowish-green edges; the greater and median wing-coverts tipped with white and the primary coverts dark brown; under parts dull buffish white; bill blackish brown, feet dark brown, iris hazel.

The female is duller in colouring than the male and has a paler crest; young birds have the crown of the same colour as the rest of the upper surface, only acquiring the yellow colouring after the first moult.

The habits, haunts and even the nest and eggs of this species are extremely like those of its near relative the Gold-crest; the nest is similarly suspended and is usually formed of moss felted with spiders' cocoons and thickly lined with feathers. If the branch in which it is placed chances to be covered with lichens,

the Fire-crest utilizes these also in the outer walls; in all probability this is done simply because the material is at hand; not, as has been suggested, with any idea of imitating the surroundings of the nest, with a view to its concealment. That the use of that which is most easily obtainable, because nearest, does often greatly add to the difficuly of discovering a nest by the inexperienced collector, nobody will deny; but to credit the little architect with deliberate design in the use of such material is, in my opinion, utter nonsense: indeed I have seen the nest of a Chaffinch in a hedge rendered most conspicuous by a covering of lichen from the trunk of a tree a yard or two behind it, and a Wren's nest built of coarse dead grass and standing out prominently from the mossy trunk of a tree: both of these nests are in my collection.

Speaking of the habits of the Fire-crest, Seebohm says:—"Their presence is at once betrayed by their soft notes, a monotonous *zit-zit*, which is continually uttered as they are busily employed feeding on insects under the leaves of the overhanging trees, and becomes a rapid *z-z-z-zit* as they chase each other from tree to tree, or fly off in alarm at your movements. If you remain perfectly still they will sometimes come and feed close to you, occasionally two or three of them within a few feet of your head. It is very curious then to watch their movements. They twist in and out among the slender twigs, sometimes with head down and sometimes with feet up; but by far the most curious part of the performance is when they come to the end of the twig and examine the under surface of the leaves at its extremity. They have nothing to stand upon; so they flutter more like bees than birds from leaf to leaf, their little wings beating so fast that they look transparent, their bodies all the time being nearly perpendicular. Of course it is only on large-leafed oaks, and the shrubs that form the underwood in the garden, that you can examine them closely. In the pine-forest, when all the branches for twenty feet are broken off for fuel, you require a glass to see them well." (British Birds, vol. 1, p. 459).

Seebohm quotes the following from Dixon's Algerian notes on this species:—"The trees are full of life. Here in close company with the rare Algerian Coal Tit, the Fire-crest is very common. It is seen in the tall cedar trees, and is restless and busy amongst the branches fifty feet above, exploring all the twigs in search of its favourite food. The Fire-crest is also almost as common in the evergreen-oak forests, searching the lower branches all amongst the lichens and tree-moss for insects; and every now and then its brilliant crest glistens conspicuously in the sunlight. Its note sounds shriller to me than a Gold-crest's; but I think it was quite as familiar and trustful as that other little favourite bird of mine. In its motions it puts you in mind of the Willow Wrens; and when, as I

have sometimes seen it, hanging with one leg from a drooping bough, picking out the insects from a bud, it looks precisely like a Tit. Although we were in these forests in May, the birds did not seem to have begun to breed."

Other writers, however, state that the note of the Fire-crest is "not so shrill" as that of the commoner species.

The eggs, although averaging about the same number as those of the Gold-crest, are, I believe invariably, redder than even the most rusty eggs of that species, the markings usually covering their entire surface.

Speaking of the nesting of this species, Howard Saunders remarks:—"In Germany the branches of a fir-tree are almost invariably selected; the nest being seldom found in pines or larches; and the same trees are frequented year after year. In the above country nesting does not begin before May; but in the south of Spain the young are able to fly by the middle of that month. Insects and spiders constitute its food." He continues thus:—"In the Pyrenees, with excellent opportunities for observing the habits of both species, I noticed that the Fire-crest was much more restless and erratic in its movements, darting away suddenly after a very short stay upon the gorse-bush or tree where it was feeding, and being often alone or in parties of two or three at most; whereas the Gold-crests, five or six together, would work steadily round the same bush, and, if I remained quiet, would stop there for many minutes."

Hewitson, in the third edition of his "Eggs of British Birds," states that the "Rev. E. H. Brown has watched this species during the summer, near his residence at Blo' Norton, in Norfolk, and has no doubt it breeds there." The probability is that he was merely misled by brightly coloured examples of the Gold-crest, not being aware of the true distinctive characters of the two species: at any rate his supposition has not been confirmed.

In an aviary the Fire-crest might be associated with the Gold-crest and would require precisely the same treatment; but it is not probable that many Aviculturists will have an opportunity of obtaining it in this country. Dr. Russ says that until recently it was supposed to be impossible to keep the European species of *Regulus* for any length of time, but recently they have been found in the care of a considerable number of aviarists; he, however, considers their habituation to confinement difficult. In disposition they are particularly gentle, sociable and peaceable.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE YELLOW-BROWED WARBLER.

Phylloscopus superciliosus, GMEL.

MR. Howard Saunders only mentions three examples of this pretty little species as having been obtained in Great Britain: but, in the "Zoologist" for December, 1894, Mr. J. E. Harting says:—"On October 8th, Mr. Swailes, an observant nurseryman, at Beverley, hearing the note of a small warbler which was unfamiliar to him, shot the bird, and sent it for identification to Mr. F. Boyes, who pronounced it to be *Phylloscopus superciliosus*, and on communicating this information, Mr. Swailes found and shot two others in the same locality. Mr. Boyes having reported this interesting occurrence in 'The Field' of October 27th, Mr. J. H. Gurney, in the succeeding issue (Nov. 3rd) announced that on Oct. 1st one of these little birds was shot on the coast of Norfolk by a labouring man, who fired at it merely for the purpose of unloading his gun! As ten instances of the occurrence of this species in the British Islands have now been made known, its claim to be regarded as a British bird, which for a quarter of a century remained doubtful, may now be said to be established."*

To Aviculturists Mr. Swailes is well-known as a successful breeder of British birds in out-door aviaries.

Touching the distribution of *Phylloscopus superciliosus*, Seebohm writes:—"The breeding-range of the Yellow-browed Warbler is supposed to be confined to the pine-forests of North-eastern Siberia, from the valley of the Yenesay eastwards to the Pacific, and from the mountains of Lake Baikal northwards to the Arctic circle. It passes through Mongolia and North China on migration and winters in South China, Assam, Burma, and North-east India. Like some other Siberian birds which winter in South-east Asia, a few examples appear more or less regularly to take the wrong turning at Yeniseisk, and, instead of accompanying the main body of the migratory species, which follow the course of the Angora through Lake Baikal into the valley of the Amoor, join the smaller stream of migration, which flows westwards into Persia and Europe."

In the spring the adult bird above is olive-green, the rump and upper tail-

* One of the specimens recorded by Mr. Swailes has, since, been presented by him to the Natural History Museum.

YELLOW-BROWED WARBLER ♂

[illegible] 21

coverts yellower; wing-coverts, flights and tail-feathers brown, edged with olive-green, the median and greater wing-coverts broadly tipped with greenish-yellow, forming two distinct bands, the secondaries and several of the primaries tipped with yellowish-white; a greenish-yellow superciliary stripe which becomes whitish behind the ear-coverts; under-surface white, tinged with greenish-yellow, the axillaries, under wing-coverts, and thighs yellowish; bill dark brown, feet brown, iris hazel. After the autumn moult the colouring is brighter and yellower. Young birds are greener and have a less defined eye-stripe than adults.

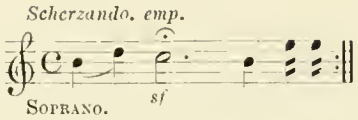
The home of this little bird is made in the pine-forests of N.E. Siberia, where Mr. Seebohm found it very common, he describes its call-note as a plaintive *weest*, whereas Gätke says: "This call has the sound of a somewhat long-drawn, softly intoned 'hjiiph,' and somewhat approaches in character the call-note of *Anthus pratensis*."* However, it was reserved for Mr. Seebohm to be the first discoverer of the nest of this interesting species on the 26th June, 1877:—"As we were walking along a little bird started up near us, and began most persistently to utter the well-known cry of the Yellow-browed Warbler. As it kept flying around us from tree to tree, we naturally came to the conclusion that it had a nest near. We searched for some time unsuccessfully, and then retired to a short distance, and sat down upon a tree-trunk to watch. The bird was very uneasy, but continually came back to a birch tree, from which it frequently made short flights towards the ground, as if it were anxious to return to its nest but dare not whilst we were in sight. This went on for about half an hour, when we came to the conclusion that the nest must be at the foot of the birch tree, and commenced a second search. In less than five minutes I found the nest, with six eggs. It was built in a slight tuft of grass, moss and bilberries, semi-domed, exactly like the nest of our Willow Warblers. It was composed of dry grass and moss, and lined with reindeer-hair. The eggs are pure white in ground colour, spotted very thickly at the large end, in the form of an irregular zone, with reddish brown, and more sparingly on the remainder of the surface; some of the spots are underlying and paler, but not grey, and on one or two of the eggs they are confluent. They measure ·6-inch in length and ·45-inch in breadth. The markings are well defined, like those on the eggs of the Chiffchaff; but the colour is decidedly more like that of the Willow Warblers."

Gätke says:—"The conditions which favour the passage of this bird to Heligoland are an east wind, particularly a light south-east, and warm sunny weather. After its arrival it frequents principally the few tree-like willow shrubs

* I should judge that Gätke's rendering of bird-notes was more likely to be accurate than Seebohm's, and *heeffe* (or more probably *hweeph*) is likely to be a call-note, whereas *weest* is certainly not.—A.G.B.

in the gardens between the houses of the upper plateau (Oberland). It appears to have a special preference for *Salix smithiania*, for which reason I always cultivate this species in my garden. It is hardly ever seen on *S. caprea* or on elders, but likes high thorns and the greater maples *(Acer pseudo-platanus)*. In its manner of hopping through the branches of these tree-like bushes and garden-shrubs it exactly resembles the Chiffchaff and Willow Wren. In doing so, it does not, however, make use of its wings for propelling itself, as the two last-named species do incessantly, even when they do not require their wings for the purpose of fluttering from one branch to another; nor does this bird hop about in the unsteady, and to all appearance, aimless manner of the latter birds, but progresses calmly and gradually from the lower branches to the top of the tree or bush."

Mr. F. W. Frohawk writes:—"On the 1st or 2nd of October, 1895, at 10 a.m., on one of those beautiful summer-like days we had during the last week of September and first week of October, during our stay at West Buckland, S. Devon, my wife (who is well acquainted with most of our native birds) told me she had just seen, in the hedge surrounding the garden at the back of the cottage, some little birds which were singing and were new to her, and was sure they were something rare. I at once went to the spot and immediately heard the song of a bird which was unlike anything I knew, and directly afterwards saw a small Warbler hopping from one twig to another in the hedge and taking short flights of a few feet from one part of the hedge to another, generally alighting about half way up, and then hopping to the top, and singing its little song repeatedly. A short distance (only a few yards) away another was singing, and behaving in the same way, and two others with precisely the same actions, but not singing, were with them. All four were of the same species: they appeared to be as nearly as possible, intermediate between a Gold-crest and Willow Warbler, so far as I could make out the colouring: this was rather difficult to do, on account of viewing the birds against the sky, as the hedge was on rather a high bank and they kept on the outer side of the hedge. They were olive-greyish-green, or rather olive-greenish-grey, with under parts lighter and a distinct pale stripe running from the beak over the eye and beyond it; the wings (basal half) appeared covered by the side and flank feathers. They reminded me of the Gold-crest, but were not so small or so fluffy, they appeared rather more trim in shape, but more plump in proportion than the Willow Warbler. The song was well in keeping with the little birds and I found no difficulty in noting it, as I repeated it time after time with the birds (which appeared very tame) and by many repetitions I was satisfied I hit it off accurately: this enabled my wife to set it to music, which will convey the character of the bird's simple, but merry and pleasing little song.



Apparently these little strangers were on migration, as I saw nothing more of them, although I searched the locality daily afterwards.

I have little doubt that these birds were Yellow-browed Warblers *(Phylloscopus superciliosus)*; if not, what were they? I do not know if the song of this rare little bird has been described, or if any Ornithologist is acquainted with it; if so the species might be identified with certainty. As well as I remember these birds agreed in size and character with a drawing the late John Hancock showed me, made by him from a specimen of the Yellow-browed Warbler which he shot many years ago and which was the first British specimen: his drawing represented the bird clinging to the flower-head or seeds of a plant, picking the insects from it, and he said it looked so like a Gold-crest that he mistook it for that species; but, upon shooting it, found he had gained a prize.

I regret that I had no means with me at the time of securing a specimen out of the four I met with, so as to remove all doubt of the species: I should have had no difficulty in obtaining one or more, had I had my catapult at the time; this I find the best thing for collecting such birds as Gold-crests, as it damages them so little, and these little birds were so tame that I could easily have got one or two of them."

Since writing the above, Mr. Frohawk obtained skins of the Yellow-browed Warbler for illustration on our plate of that species, and at once recognized them as the species which he and his wife had seen; thinking, however, that it would be as well to make assurance doubly sure, he showed her the drawing for the plate as well as the skins, without making any remark; and, directly she saw them she said—"Why those are the same as the little birds which we saw hopping about in the hedge in Devonshire." It is therefore clear that Mr. Frohawk was not mistaken in his original opinion, and that these four specimens may be confidently added to the list of Yellow-browed Warblers met with in Great Britain.

Some years later, in the autumn, I watched one of these birds for a considerable time going over a large rose-tree in search of insects, in my Beckenham garden: it was quite near the back of the house, and with a pair of opera glasses I was able to identify it with certainty.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE CHIFFCHAFF.

Phylloscopus rufus, BECHST.

A PARTIALLY resident bird in mild winters in the warmer parts of Cornwall, but by far the greater number migrates annually from our shores in October: this species is, however, the first to return in the spring, its monotonous double note being often heard by the middle of March.

The northward range of the Chiffchaff in Europe extends almost to the Arctic circle and eastward to the valley of the Volga, southward to the shores of the Mediterranean; it is a regular winter visitor to Northern and North-eastern Africa as far as Abyssinia, as well as to Arabia, Persia, Asia Minor, Palestine and Greece: it is resident in the Canary Islands.

In Great Britain this species is probably more abundant in the south and south-west of England, but it is fairly common in suitable localities throughout England and Wales; in Scotland and Ireland it is less frequently met with and much more local.

The adult Chiffchaff in spring plumage is olive-green above, the rump being slightly yellower; the wing and tail-feathers are brown, externally edged with green; the flights narrowly tipped with white; a pale yellow superciliary streak which becomes white behind the ear-coverts; the lores and feathers behind the eye olive; under surface of body white, slightly greyish on the breast and flanks, and faintly washed throughout with greenish-yellow; the axillaries, under wing-coverts, and thighs yellow; bill dark brown, feet blackish-brown, iris hazel. After the autumn moult the entire plumage becomes suffused with buffish-yellow. Young birds are somewhat greener than adults and have the superciliary streak less defined.

The song of the Chiffchaff, if such it can be called, must be familiar to everyone who has been in the country, or certainly to all inhabitants of our southern counties. In the spring it is well-nigh impossible to ramble anywhere near to a wood without hearing its incessant *chiff-chiff, chiff-chiff, chiff-chiff* (never

CHIFF CHAFF ♂.

PLATE 25.

chiff-chaff, as its name would lead one to expect): yet, common as it is, the nest of this bird is not by any means so easy to discover as one would suppose.*

But for its very inferior song, slightly smaller size, duller colouring, weaker and more undulating flight, the Chiffchaff might readily be mistaken for the Willow-Wren; it is, however, far more a bird of the woods than the latter species, often making its home in small clearings far away from the outskirts. Sometimes however, the nest is built in small shaws or plantations where the undergrowth is dense, and one nest in my collection was taken by my friend, Mr. O. Janson, from a cavity in a steep bank just outside one of the Kentish shaws; he was searching for nests just ahead of me at the time and showed it to me *in situ*.†

A very beautiful nest, which I illustrated as a frontispiece to my "Handbook of British Oology," I found in course of construction on the top of a short mossy stump almost buried in a large patch of dead coarse grass in a small clearing, at the side of a woodland path some 500 yards from its entrance. The nest itself was situated about twenty feet from the path (towards which its back was turned) and was so interwoven with the surrounding dead grass that unless I had seen the birds carrying materials to it, I should certainly never have noticed anything to make me suspect its existence; I marked the spot by treading a flint into the edge of the path, and a week later again visited the spot, when finding that it contained four eggs, I took it at once rather than risk the chance of its discovery by someone else.

Lord Lilford's experience of the Chiffchaff's nest in Northamptonshire differs somewhat from my Kentish experience of it; he says that it "is hardly to be distinguished from that of the Willow-Wren, but is, I think, more often placed at some height from the ground than is the case with that bird."

Judging from the nests which I have robbed, as well as those which I have preserved, I should say that the majority of those of the Chiffchaff were slightly higher in proportion to their width and more contracted round the opening than those of the Willow-Wren; the outside also is perhaps more generally decked with dead leaves in nests of the former than of the latter species; but to be sure of one's facts, one ought to be able to compare a large number of nests from different counties.

The nest of the Chiffchaff is cave-like, or semi-domed, with a tolerably wide

* The nonsense that has been written about this bird saying *chiff, cheff, chaff* is only an evidence of the fact that the English are even now an imaginative people (I believe this has been denied); take away the *chaff* and I will admit that the second syllable is sometimes uttered, though I believe it is only a slip on the part of the bird, thus:—"*Chiff-chiff, chiff-chiff, chiff-cheff, chiff-chiff.*"

† I have been criticized for not stating that the nest of the Chiffchaff, although often placed near to or on the ground is never placed in it, like that of the Willow Warbler; but the nest here described was placed in a hole in the ground, though not in *level* ground.

opening; the thickest portion of the structure is at the top, probably with a view to protection against rain; the walls are formed of coarse dead grass-stems intertwined with dead blades of grass, plant-fibre, rootlets, dead as well as skeleton-leaves and spiders' cocoons; the inside is lined with fine rootlets, horsehair and a number of feathers carefully smoothed down. The number of eggs varies from five to seven, the former being the usual number; in colour they are pure white, though when not blown the yolk gives them a pink tinge;* they are more or less dotted or spotted, as a rule, with deep chocolate or pitchy markings; but sometimes these spots are mixed with other larger ones of a sienna red colour, with here and there a pale lavender shell spot. Sometimes the spots are chiefly confined to the larger end, sometimes they form an unequal, oblique, and somewhat vague belt across the surface, often they are evenly scattered over the entire egg; but in spite of all these little modifications there is never the slightest difficulty in recognizing, at a glance, the egg of the Chiffchaff, it is as characteristic as that of the Lesser Whitethroat.

The food of this species consists of many kinds of small insects, their larvæ, and of spiders: it also feeds on elder-berries and currants as soon as these are ripe: it seeks its insect food chiefly in the trees, but does not scorn to snatch a small beetle or spider from the ground, or to chase a gnat or fly in the air. Its flight is very undulating and not specially rapid.

The alarm-note is said to be a *whit* somewhat resembling that of the Willow-Wren; but is not this its call-note † and the other note *tr-r-r* (to which no title has been applied) its alarm or scolding note?

In his "Birds of Norfolk," Mr. Stevenson states, on the authority of Messrs. Gurney and Fisher, that a low bush, frequently of furze, appears to be a favourite locality for the nest of this species and that as many as four have been found in such places within a few yards. I never knew the nest to occupy such a site in Kent, but birds appear to vary their habits greatly to suit their surroundings.

I have not tried the Chiffchaff as an aviary bird; but, unless it be intended to breed it, when the furze-bush arrangement might be tried, I should hardly think this species would pay for its keep: a few Willow-Warblers would be far more pleasing in every way. On the other hand, there is no doubt that when once accustomed to the usual soft food, the Chiffchaff would prove hardy enough and its graceful actions would be pleasing, but I doubt if any human being could

* Eggs which have been partly incubated lose their purity of colouring, becoming somewhat creamy; but this is not a peculiarity of the Chiffchaff alone; therefore to describe the egg as cream-coloured is not strictly correct.

† The little White eyes (*Zosterops spp.*), which always reminds me of the Willow-Wren on a small scale, have a clear call-note—*whi-et*.

A. Gronvold

long retain his senses, if compelled daily, for months together, to listen to the everlasting *chiff-chiff, chiff-chiff, chiff-chiff* of this little bird. Now and again as one passes through a wood it is a pleasing change, as the triangle is in a concert; but imagine a concert going on for months consisting of no other instrument than a triangle; believe me, even that would be more pleasant than an everlasting Chiffchaff's song.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE WILLOW-WARBLER.

Phylloscopus trochilus, LINN.

GENERALLY distributed during the summer and breeding throughout Western and Central Europe, southwards as far as the Straits of Gibraltar, eastward in Transylvania. It visits South Russia, Turkey, Greece, Asia Minor, Persia, and Palestine in winter and on migration; but it passes the winter chiefly in Africa from the Nile south-westwards as far as the Cape, and south-eastwards to the Transvaal and Natal. A few, however, winter in the south of France and Spain, and a few pass the summer in N.W. Africa.

In Great Britain the Willow-Warbler is pretty generally distributed and abundant, though in Cornwall, Wales and Ireland only locally common; to the Orkneys, Shetlands and Faroes it is apparently a mere straggler.

This species is a much brighter and prettier bird than the Chiffchaff: in spring it is olive-green above with the rump yellower; the wing-coverts are olive-brownish, with greener margins, the flights brown with narrow whitish tips; and yellowish outer webs; tail-feathers brown, with whitish inner and yellowish outer edges; a superciliary yellowish streak from the bill over the eye and ear-coverts; under parts yellowish, the chin, centre of throat, abdomen and under tail-coverts white; the breast and flanks olivaceous yellow or olivaceous buff; the axillaries, under wing-coverts and thighs yellow; flights and tail below ashy-

grey; bill brown, darkest on the culmen, palest below; feet greyish horn-brown, iris hazel. The female nearly resembles the male. After the autumn moult the colouring, especially in birds of the year, is so much more yellow, that a neighbour sent round to me in 1894, to inform me that one of my Canaries had got loose and was flying about my garden. I was much tickled when I caught sight of it, flitting about a privet hedge at the back of my covered aviary, catching flies. The popular notion is that every yellow bird is a Canary.

The Willow-Wren (so-called) reaches the south of England about the end of March, or the first week of April, leaving this country again about the middle of September. Soon after its arrival and for about a month prior to its departure it may be daily seen in most suburban gardens: I generally see it regularly for a week in April and during the latter part of July and beginning of August; but rarely, if ever, during the remainder of the year unless I go farther afield, to furze-clad commons, copses, woods, plantations, or the more secluded parts of large gardens.

I know of no bird more graceful and active than the Willow-Wren; acrobatic and confiding as a Coal-tit, yet with a more easy lighter flight and greater control over itself when on the wing; restless exceedingly, but most beautiful in all its agile movements, whether it be seen clinging to the upright bars of an iron garden archway, to the feathery spray of some conifer, or flitting with rapid undulating flight in pursuit of some small winged insect: even when, on rare occasions, it drops to the earth in pursuit of some coveted morsel, its Robin-like hop is in keeping with its neat trim figure.

The song of the Willow-Warbler is somewhat shrill, but decidedly pleasing; it vaguely reminds one of that of the Chaffinch, but the scale is irregular, being more staccato; though far less melodious it also bears a slight resemblance to the song of the common Amaduvade Waxbill; but differs, as a descending zigzag does from a descending spiral, the notes sounding as if flung right and left.

The nest is frequently placed amongst grass on the ground, or in branches close to the ground, and almost hidden by grass and nettles; sometimes, however, it is found some feet above the ground, one which I took on the 16th June, 1881, was built over two feet above the earth in a wild rose-bush in a large garden at Tunstall, in Kent; also in the "Zoologist," for 1878, Mr. E. P. P. Butterfield states that in 1876 he observed a nest built between two rocks at a distance of three feet, and another in 1878 in a clump of whins two feet from the ground; but probably the greatest recorded altitude is that mentioned by Mr. Alston, when the nest was built in a hole in a wall nearly seven feet from the ground.

The nest in form is usually cave-shaped or semi-domed, the thickest portion

being at the top as in the nest of the Chiffchaff; but in 1883, I obtained a very abnormal cup-shaped nest which was built under a gooseberry bush in an orchard; the usual arched covering was rendered unnecessary from the fact that a large clod of hard earth completely overhung the cup: in all probability this clod had been accidently flung over the nest when it was in course of construction and the little architect instead of being scared away by the seeming misfortune, had utilized it as a time-saver: this nest with its four beautifully spotted eggs is still in my collection.

The nesting materials consist of dry grass, either coarse or fine, mixed with fern, dead leaves or moss, and spiders' cocoons; externally somewhat untidy in appearance though firmly compacted: the lining consists of wool, hair, and plenty of soft feathers, and has a neat and comfortable appearance.

The eggs vary in number from four to eight; but five to six are more usually found: they are pure white, rarely unspotted, sometimes finely speckled and distinctly zoned round the larger extremity with rust-red, sometimes prominently spotted irregularly with the same colour. Apart from their usually superior size, the totally dissimilar colour of the spots would preclude the possibility of these eggs being confounded with those of the Chiffchaff.

Towards the end of July, 1887, a young example of the Willow-Warbler was brought to me by two lads of my acquaintance, it had flown into their parents' house, probably in pursuit of flies. At first it was very wild, so I turned it into a cage, about eighteen inches cubic measure, with a hand-reared Sedge-Warbler. The following morning, as I was offering a fly to the latter bird, the Willow-Warbler sprang over his back and snatched it from my fingers; it had become perfectly tame in thirty-six hours. I mentioned this fact to Dr. Günther who assured me that, such being the case, he was certain (from his own experience) the bird would die in a day or two: he could not explain why it was so, but it was an invariable rule that, if Warblers became suddenly tame soon after capture, they never lived long. The following morning my Willow-Wren was sitting ruffled up with its head under its wing: but, after swallowing two caterpillars and two house-flies, it appeared to recover its spirits and became as lively as at first. In the afternoon my son offered it a fly, putting his hand into the cage and holding the insect between his finger and thumb: the little bird flew down upon his hand and took it, then hopped round pecking at his fingers. Half an hour later it was found lying dead on the draw-tray of the cage.

In July, 1889, I trapped two Willow-Wrens in my garden and turned them loose in an aviary sixteen feet long; there they seemed happy enough catching flies and spiders; but they did not seem to understand the soft food, although

they must have seen other birds eating it: consequently they soon sickened and died: since then I have not attempted to catch any others.

There is no doubt that, in order to get these little birds to eat the soft food, the best plan would be to cage them up at first, giving them two food pans, one half filled with small mealworms and filled up with the food, so that it would be impossible for them to eat the living food without tasting the other; the second pan with soft food only, which they would be certain to peck over in search for more insect larvæ. The only alternative, and a risky and trying one at best, would be to rear your Warblers from the nest; but then, in all probability, they would never sing.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE WOOD-WARBLER.

Phylloscopus sibilatrix, BECHST.

AS regards the geographical distribution of this species on the Continent, I cannot do better than quote Howard Saunders:—"The Wood-Wren has not yet been proved to visit Norway, but it is found in Sweden as far North as Upsala; while it is very common in the Baltic Provinces, rarer in South Finland, and a straggler to Archangel. Eastward it can be traced to Kazan, the lower valley of the Volga, the Caucasus, and the western shore of the Caspian. In Palestine, Asia Minor and Greece, it occurs on migration; but it breeds in Turkey, Transylvania, and Europe generally, although rarely in the extreme south; while in Portugal the bird seems to be almost unknown. It appears probable that a few remain during the summer in the mountain forests of the Atlas; the winter migrations extending to the Gold Coast on the west side of Africa, and to Abyssinia on the east."

In England it is generally distributed, breeding in many suitable localities; it is very local in Scotland, but in Ireland it is absolutely rare.

Gronvold

The Wood-Warbler is the largest British species of its genus, and has the longest wings. The adult bird, which varies very slightly in colouring throughout the year, has the upper surface yellowish-green, the rump and upper tail-coverts being most yellow in tint; the wing-coverts olive-green with the margins of the feathers paler; the flights greyish-brown, externally edged with green and tipped with whitish, the innermost secondaries with broader pale margins; tail greyish-brown, the outer webs greenish, and the inner webs pale greyish on the edges. From the bill over the eye and beyond it is a broad sulphur-yellow superciliary stripe. The under surface is pure white; the chin, throat and breast suffused with sulphur-yellow; the axillaries, under wing-coverts and thighs are also yellow. Bill dark brown, the lower mandible paler at the base; feet brown; iris hazel.

The young bird is slightly more yellow than adults; but the sexes are much alike.

The Wood-Wren is rarely with us until towards the end of April, and in September it commences its winter migration; in its habits it is not unlike its congeners, but is more exclusively a bird of the forests and the larger woods, than of copses and plantations. Lord Lilford, in his "Birds of Northamptonshire," says:—"So far as my experience goes of the Wood-Wren, or Wood-Warbler (as this bird is, I think, more generally called) it is fond of woods of high trees, especially of beech, beneath which there is little or no undergrowth with the exception of occasional tufts of coarse grass in the scattered spots not actually overshadowed by the spreading branches of the trees. In these and similar localities we occasionally hear, about the beginning of May, a very peculiar note, which is described by White, of Selborne, as a 'sibilous grasshopper-like noise:' sibilous it certainly is, but I can perceive no resemblance in it to the cry of the grasshopper. A good description will be found in the fourth edition of Yarrell; but even this fails to convey exactly the sound produced, though I certainly am unable to improve upon it, and can only say that to my ear it has a certain resemblance to the sound of the wings of wild ducks when flying overhead, though, as stated by Yarrell, it begins slowly, and is more musical than any sound produced by mere muscular action can well be. This song is accompanied by a quivering of the wings, which are drooped during the performance."

Mr. Blyth described the song as "*Twit, twit, twit, tit, tit, tit, ti-ti-ti-i-i-i*, beginning slow, but gradually becoming quicker and quicker, until it dies away in a kind of thrill;" and Seebohm says:—"It might be expressed on paper thus—*chit, chit, chit, chit, chitr, tr-tr-tr-tr-tr-tre.* The final trill somewhat resembles the note of the Grasshopper Warbler or the lesser Redpole, or the prolonged 'shivering' part of the song of the Common Wren; and during its utterance the wings and

tail, if not the whole body of the bird, vibrate with the exertion." Unfortunately when I have heard the bird, I have been too eagerly engaged in search of its nest to make notes respecting its song, or I would give my own rendering; memory is a treacherous staff to lean upon, but so far as it serves me in this particular instance, I should be inclined to accept Seebohm's rather than Blyth's version, as not only appealing to my conviction of its greater accuracy as a reminiscence, but as sounding less like a particularly irritating street song.

I have, several times, found the nest of this species in coarse grass-tussocks, or amongst the dead leaves of a small branch, torn off by the wind and half hidden by grass and nettle; always, however, in openings in beech or oak-woods, and not far from the outskirts. Unfortunately I never secured any eggs of the Wood-Warbler; the nests which I found having either been only just completed, or perchance plundered of their contents; not, however, by country lads, or they would have been torn out and destroyed.

The nest, like that of its congeners, is semi-domed, and constructed of dead grass mixed with leaves and occasionally a little moss; it is lined with horsehair, but never with feathers. The eggs number from five to seven and are pure white, more or less densely speckled, spotted or blotched with purplish-brown and intermixed with numerous shell-spots; the markings are either scattered broadcast, partly confluent so as to form irregular patches, or are partly collected into a zone towards the larger end.

The food of the Wood-Wren consists principally of insects, their larvæ, and spiders; but there is no doubt that it also eats elder-berries when procurable.

The call-note has been described as *dee-ur*, *dee-ur*, but more probably the sound is *tee-ur*, though the call of the Starling certainly sounds like *Joey dee-ur*, *hee-ur:* it is not easy to distinguish the *d* from the *t* sound in a whistled note. Touching another sound uttered by this bird, Howard Saunders writes:—"Sloping wooded banks are favourite situations for the nest, which often is not merely *on* the ground, but is actually set *in* some natural hollow, well concealed by herbage. The hen at times sits very close: when fairly beaten out, she will feed in an unconcerned manner, uttering a low *pi-ó* for a quarter of an hour or more; after which she works round to a branch above her nest, drops down abruptly and enters it in an instant."

Gätke says that the Wood-Warbler "visits Heligoland only in very isolated instances, such few individuals as are met with being seen for the most part in warm May days. During its autumn migration—from the middle of July to the middle of August—the bird is much rarer."

As an aviary bird the Wood-Wren would doubtless be interesting, though

neither specially remarkable for bright colouring or vocal merit; I should however expect to find it just as difficult to accustom to a change of diet as the Willow-Warbler. I am of opinion that the few examples of *Phylloscopus* which, from time to time, appear at our bird-shows are invariably hand-reared, although Swaysland speaks of them as being easily tamed; and of the present species he observes (Cassell's Cage-Birds) "If allowed to fly about the room, its first thought is the selection of a perch; when it has satisfied itself on this point, it will show great expertness in catching the flies from off the walls and ceiling, always returning to its favourite perch to eat them." Possibly my own want of success in keeping the Willow-Warbler may have been due to the fact that my birds were captured in July; for it has been asserted that, for some unexplained reason, Warblers become more readily accustomed to captivity if caught on their arrival in this country than just before or at the season of their departure. Not having captured any Warblers in the spring months, I am quite unable to decide the point.

The two following birds should not, I think, be admitted as British; each of them having only appeared as an accidental straggler on three occasions:—

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE RUFOUS WARBLER.

Aëdon galactodes, TEMM.

A SOUTH European species, of which the first example was shot near Brighton by Mr. Swaysland, on September 16th, 1854; the second was an imperfect specimen obtained in Devonshire, on September 25th, 1859; the third was also obtained in Devonshire, on October 12th, 1876.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE ICTERINE WARBLER.

Hypolais icterina, VIEILL.

A NORTHERN and Central European species, of which the first example was killed near Dover, on June 15th, 1848; the second in co. Dublin, on June 8th, 1856; the third in Norfolk, on September 11th, 1884. Two other examples have now been killed in Norfolk, the last at Cley on the 7th September, 1896. Others have been obtained subsequently, and I have seen an egg received in a consignment of eggs from Norfolk which was suspiciously like that of this species.

The general colouring of the Icterine Warbler is olive-green; an indistinct yellowish eyebrow stripe; flights brown, edged and tipped with greenish-white; coverts and innermost secondaries more broadly edged with brownish-white; tail-feathers brown, with indications of transverse bars and narrow pale edges; under parts greenish-yellow; under wing-coverts and thighs flecked with brown; bill dark brown, paler on lower mandible; eyes hazel; feet bluish-grey; sexes much alike, but the bills should be compared.

The nest is usually built in the fork of a small tree eight to ten feet above the ground, and is formed of dry grass intermixed with moss, wool, spiders' webs, vegetable down, bark, and lichen, and lined with rootlets, bents, and horsehair; four to five, or rarely six, eggs are laid, of pinky-brownish colour, uniformly spotted and occasionally streaked with purplish-brown, sometimes very deep in colour; shell-markings ill-defined.

The song of this species is somewhat harsh, though strong and varied: to compare it with that of the Nightingale, as has been done, is generally regarded as a libel on the performance of that most excellent songster.

It is in the highest degree improbable that either of these species will fall into the hands of any of the readers of this present work: should they have the good fortune to meet with them I hope that, in the interests both of humanity and science they will not shoot them; but, if possible, capture and study them living. It is a melancholy fact that almost every rare bird which accidentally wanders to our shores is doomed to be shot, for the mere satisfaction of labelling

it as British; the same individual, if shot in the land of its birth, would probably be valued at a shilling or less.

We now come to the Reed-Warblers, whose suspended nests are often taken and preserved as ornaments by mere admirers of the beautiful; without one thought of the little architects, or the faintest desire to know anything respecting them.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE REED-WARBLER.

Acrocephalus streperus, VIEILL.

SEEBOHM states that, on the Continent, the Reed-Warbler "is found in suitable localities in summer throughout Europe, south of latitude 58°, and in Asia Minor, Palestine, South-west Siberia, Turkestan, Persia, Baluchistan, and probably in Afghanistan. It is said to be a resident in Greece and the surrounding islands; but it passes through North Africa on migration, and winters in Central Africa."

In Great Britain this species is local, being very common in the southern counties, with the exception of Cornwall and the Scilly Islands; it is also common in suitable localities in Wales, Cheshire, and Yorkshire; but local in Lancashire and rare in Cumberland. In Scotland it is said to have occurred, and one example has been recorded from Ireland; but these statements require confirmation.

The Reed-Warbler above is olive-brown suffused with chestnut, more especially on the rump and upper tail-coverts; the innermost secondaries with pale margins; an ill-defined pale-buff superciliary stripe; under surface creamy-white, the breast, flanks, and under tail-coverts rufous-buff; bill dark horn-brown above, paler below, feet slaty-brown, iris brown. The female nearly resembles the male; both sexes

are slightly more rufescent after the autumn moult. The young are very tawny on the under surface.

This species reaches Great Britain towards the end of April, and leaves again in September.

Although, as its name implies, the Reed-Warbler mostly frequents reed-grown dykes, ponds, or the edges of broads and rivers where reed and sedge abound; I have seen it also fairly abundant in marshy copses in Kent, and in gooseberry gardens in Norfolk; but always in the vicinity of water: on the other hand Mr. R. H. Mitford speaks of its nesting in lilac-trees in his garden at Hampstead. I have three nests built in forks of hazel, the first of which is of the normal type, and was given to me by the Hon. Walter de Rothschild, who obtained it at Tring; the two others were sent to me by Mr. Salter, from Salisbury, and decidedly approach the nest of the Marsh-Warbler in character, as also do the eggs in one of them; in both the latter instances, the hazels were growing close to water. The nest of this bird is most frequently suspended in reeds; sometimes the attachment is firm, sometimes loose; the latter arrangement is adopted and the nest fastened above a leaf when the level of the water shows great variation during the day; thus, when the water rises it raises the nest, which is built with an unusually thick base above the projecting leaves: this I have proved to be the case on more than one occasion, and hence Swaysland's belief that the nests in the Brighton dykes were constructed with this object has some justification, although in the particular specimens which Mr. Seebohm examined most had a leaf projecting close to the nest, both immediately above and below it on one or other of the reeds, which would make any movement of the kind impossible. From two to four reeds are employed for the suspension of the nest, the most frequent number being three.

I shall not easily forget my first experience in taking the nest of the Reed-Warbler: I had heard that the species was numerously represented among the reeds which grow in abundance at Tong Mill, in the village of Tong, near Sittingbourne. The mill and the adjoining plantation were at that time the property of a Mr. Arthur Bennett, a large-hearted man who took an interest in Natural History, so that I had no difficulty in obtaining permission to search for birds' nests wherever I pleased.

When I approached the stream I could hear the Reed-Warblers in every direction, but could only catch a glimpse of them from time to time as they emerged for a moment from the densely clustered leaves. The reeds grew most thickly near to the house; but at this point the stream was very wide, and the birds appeared to be chiefly in mid-stream; so that I was at a loss to know how

I should reach their nests which I knew must be built at the time, although none were visible from the bank.

Mr. Bennett now came to the rescue with a long ladder, which he dropped across the reed-bed, the foot remaining upon the bank, and the top floating upon the water, and partly supported by the broken-down plants. Upon this, grasping bundles of reeds on either side, I was able to walk out for some distance, looking right and left for nests as I went; and, at the first essay I caught sight of a nest about six feet away to the left.

Walking out on the rungs of a ladder, and depending for one's balance upon flexible stems, whilst with every step the water rises an inch or two higher over one's boots, is not the most enviable pastime; although the slight discomfort is more than atoned for, by the sight of the first nest of a species not hitherto met with: the difficulty of this mode of progression is, however, by no means so great as one would imagine; but, when the nest is discovered, and it is necessary to turn round and retrace one's steps, the task is by no means so easy.

Having noted the exact spot where my nest was situated, a second throw of the ladder soon brought me within reach of it; to my delight the clutch included a Cuckoo's egg, but unhappily so much incubated that I made but a poor job of preparing that nest for my collection; however, I still have it. I obtained several other nests with fresh eggs in the course of the morning; but I have never since adopted the same method for securing nests of the Reed-Warbler.

In Kent the birds are extremely common in the dykes, but the nests most difficult to find; indeed it is no uncommon thing to work carefully along half a mile of dyke, hearing the weak and monotonous song the whole time and turning aside the reeds with a long stick continuously, yet not finding a single nest; shortly afterwards, on reaching a reedy duck pond, with an old wooden box for a boat, and a pole to scull it withal, one finds the nests easily enough. In the reeds bordering the Norfolk broads there is no difficulty in obtaining nests, if one rows close along the outer edge of the reed-belt; also in the narrow dykes running into some of the broads they may be found.

The nest is a strongly constructed, deep cup, formed of dry grasses and bents, or the flowering tops of the reeds, with sometimes a little moss and plenty of cobweb; the cup being lined internally with fine grassy fibre or horsehair.

The nests obtained by Mr. Salter were unusually large and compact, formed of carefully selected stout grasses interwoven with some woolly substance (apparently vegetable), and externally swathed tightly with stronger grasses: the first sent to me contained four eggs, somewhat larger and more boldly marked than most eggs of this species. I wrote to Mr. Salter asking him to try and discover

something further respecting it. On the 27th June, he wrote to me from Downton, as follows:—"I will forward, per parcel post, to you, another nest like the one you have. I found it last Saturday with three young birds and one egg. I went again to-day and found the young ones just ready to fly. I managed to shoot one of the old ones with a catapult, but could not manage to get the other, although I waited about three hours. The nest was overhanging the water, about fifty yards from where I got the other."

The egg and birds forwarded with this second nest were quite normal, and I regretted that specimens had been destroyed in order to prove the fact: however, the birds have not died in vain.

The number of eggs in a clutch varies from five to six; they are dull greenish-white, mottled, or streakily spotted with olive, and with slightly greyer shell-markings; the spots frequently collect in a dark zone round the larger end, and are rendered richer by the addition of one or two black dots; but, excepting in the paucity or density of the markings, the eggs of this species vary very little; they always have a dull, blurred appearance.

The music of the Reed-Warbler is very poor and weak, with very little variation; it sounds more like the clamouring of nestlings for food, than the love-song of an adult bird; it has the same querulous peevishness in its tones at times, but especially when one is approaching the nest. Some bird-lovers speak of it as "pleasing," but so are all the cries of our wild birds, however deficient they may be in melody.

This bird nevertheless is by no means destitute of the powers of mimicry. The late Charles A. Witchell, in his fascinating book "The evolution of bird-song," pp. 221-2, observes:—"A Reed-Warbler heard by me at Brimscombe, near Stroud, imitated many times the cries of the Starling, including the common cry of alarm (the *cah* employed as an alarm to the young) and the song of the Starling. A pair of the latter species had a nest within ten yards of the singer; hence I was able to compare the imitations (which were excellent) with their originals. The Swallow, Wagtail, and House-Sparrow were also abundantly imitated. The Swallow's song was capitally rendered seven times successfully. Mr. H. C. Playe informs me that he has heard numbers of these birds near Oxford, and that they are good mimics."

The food of the Reed-Warbler consists chiefly of the numerous insects and their larvæ which abound upon the reeds and sedges, of spiders, small worms, slugs, and, when they are ripe, of small fruits and berries. In captivity it would probably eat the usual soft food; but I should hardly think it would make a specially interesting aviary pet.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE MARSH-WARBLER.

Acrocephalus palustris, BECHST.

IN the summer this species occurs over nearly the whole of Europe south of the Baltic; and eastwards through Russia and Siberia to Turkestan and Persia; according to Seebohm its occurrence in Asia Minor and Palestine is doubtful. It winters in Africa from the Nile probably to Natal.

In Great Britain the Marsh-Warbler is apparently very local; the nest has been recorded as taken near Bath, in Gloucestershire, in Cambridgeshire and Oxon. I am satisfied that a nest which I found, with only one egg, built in the reeds near the margin of one of the Ormesby broads was a nest of this species, although Ornithologists seem to be agreed that the Marsh-Warbler never frequents reeds, but only swampy ground. The fact that this bird is a regular breeding species near Taunton, in Somersetshire, was discovered through the acumen of Mr. Howard Saunders; the facts being as follows:—

An Ornithologist, a Dr. Woodforde, had a collection of birds, and Mr. Howard Saunders, who was visiting Mr. Cecil Smith, was taken by him to see this collection: amongst the specimens shown to him were a bird with nest and one egg, which no one previously had been able to recognize, and which Mr. Saunders identified as the Marsh-Warbler. No sooner was this fact made known than Mr. Murray Matthew, then Vicar of Bishop's Lydeard, asked Mr. John Marshall, of Taunton, if he could get old Coates, the birdcatcher (the discoverer of Dr. Woodforde's bird, nest, and egg, twenty years previously) to look about for a nest and specimens of this species. Coates being then in Mr. Marshall's employ, went with him in search of the nest; in this they were perfectly successful, so that Mr. Marshall was able to distribute both nests and eggs among his friends: two of these nests came into the possession of Mr. Seebohm; who, curiously enough seems to credit Mr. Cecil Smith with the discovery of the breeding of the species in Taunton, not even mentioning Mr. Marshall's name: the illustrations of eggs of this species in the present work are reproductions of careful coloured drawings of some of Mr. Marshall's specimens.

The Marsh-Warbler is barely to be distinguished from the Reed-Warbler; but differs in its less rufous, more greenish-olivaceous colouring above; the feathers of the wing with more defined pale borders, the under surface more yellowish in tint, the feet brownish flesh-coloured; iris hazel. As Seebohm observes:—"Some English Ornithologists, who have never made the personal acquaintance of both species, have almost refused to admit their distinctness. No doubt they are very closely allied; but in their song, habits, eggs, and geographical distribution, they differ as much as a Blackbird differs from a Thrush."

Although it has been assumed, rather than proved, that the nest of this species is never built in reeds; it is admitted that it is suspended in the same manner amongst nettles, figwort, the greater willow-herb, meadow-sweet, or low bushes, usually close to the water: probably the Marsh-Warbler does prefer to build in such situations, but either it is not botanist enough to know that it is erring when it builds in a reed-bed, or the nest and egg which I found, but foolishly trusted a youth to send me when the clutch was completed, was a very aberrant one and a superb copy of a Marsh-Warbler's production.

Naumann (quoted by Seebohm) says:—"the nest is never placed over water—not even over marshy ground. It is always built over firm ground, though this is generally somewhat moist, as it cannot help being on the bank of a stream, a situation often chosen. But you can always reach the nest dryshod.* In the lowlands I always found it near the large country houses, especially in the gardens on the banks of the moats, which sometimes were filled with reeds, and frequently contained very little vegetation. The nest was sometimes close to the water, but often many steps away from it, in low bushes overgrown with reeds, or in a small bush overgrown with reeds, nettles and other plants. It is also said to be found in the rape fields, generally in the ditches, seldom deep in the rape itself. The Reed-Warbler often breeds near the Marsh-Warbler, sometimes in the same ditch; but the latter bird always builds in the herbage on the bank near the water, whilst the former as constantly breeds in the reeds over the water. To this rule there seems to be no exception.† The nest is generally from one to three feet from the ground, very seldom nearer, and, I am told on the best authority, never on the ground itself." "It is no use to look for the nest in the middle of dense thickets, but only on their edges, especially in isolated little bushes close to the borders of ditches and moats."

The nest of the Marsh-Warbler has been compared with that of the Grass-

* The same statement has been made respecting the Sedge-Warbler, many nests of which I was only able to obtain from a boat.—A.G.B.

† This is certainly not correct, for I have myself taken the nest of the Reed-Warbler built on moist ground near the water.—A.G.B.

hopper-Warbler which it is said greatly to resemble; it is formed of dry rounded grass-stalks, sometimes intermixed with dead grass-leaves, vegetable-fibre and cobweb, and lined with finer grass, black horsehair and sometimes a little moss. The eggs vary in number from five to seven; in colouring they are pale blue-greenish, or greenish-white, spotted, blotched and streaked with olive-brown, often with darker central spots and with violet-grey shell-spots.

The song of this species is said to be far superior to that of the Reed-Warbler; Gätke hints at its resemblance to that of the Icterine-Warbler, but Seebohm says that it recalls that of the Swallow, the Lark, the Tree-Warbler, the Nightingale, and the Bluethroat: "not so loud as that of the Nightingale, but almost as rich and decidedly more varied."* If this is a correct description, the Marsh-Warbler should be greatly sought after as a pet.

Mr. Warde Fowler, in his "Summer Studies of Birds and Books," pp. 78-79, thus describes the discovery of the Marsh-Warbler's nest in Switzerland:—"At the end of the long street which leads towards the Lake of Brienz, we passed out into a spongy-looking and reedy tract, lying between the river Aar and some cultivated ground—just in the same position as the haunt of the Marsh-Warbler at Meiringen. Here I proposed that we should follow a footpath which ran along the river-side, and seemed likely to lead us to some bits of scrub and wild ground which we could see about a quarter of a mile ahead. This scrub turned out to consist of some kind of low-growing willow, with ditches and hollows overgrown with long grass and meadow-sweet. My friend plunged into it, while I went on a little further. Almost directly he called me back, and by the waving of his umbrella I saw that he had made some discovery. It was indeed a discovery, it was the nest of a Marsh-Warbler. There was the nest, and there too was the bird, which continued to creep about the neighbourhood of the nest for some minutes after we had disturbed her. There were four eggs in the nest, the beauty of which will always dwell in my memory. They were of the same type as the Reed-Warblers, but instead of being densely covered with greenish spots, their ground colour was greenish-white, with many largish dull purple blotches, gathered chiefly at the thicker end. The nest too was specially distinct from that of our familiar Oxford bird; it was of a slighter make, and not so deep, but the stalks of the meadow-sweet had been drawn into its structure, much as the reeds or the shoots of privet or lilac are used in the nest of the Reed-Warbler. It is worth noting that the few nests of this species which have been so far found in England, have been usually suspended in meadow-sweet; and also that they have

* Mr. W. W. Fowler speaks of its imitating the Tree-Pipit, Lark, Swallow, Sedge-Warbler, Nightingale, Chaffinch, Nuthatch, Great-Tit, White-Wagtail, &c., and he says that it sings best from six till ten in the morning. A charming paper on the Marsh-Warbler's nesting habits appeared in the Zoologist, 1896, pp. 286-288.

never, so far as I know, been found immediately over water, but at a little distance from it, and not very far from cultivated ground. We took one egg only, and after some further search returned to the village, and went on our way to Meiringen, where we were to sleep that night."

I do not doubt that the usual habit of the Marsh-Warbler is to build its nest above moist ground and not over water; but to anyone who has nested year after year for any considerable period, the fact that there is no rule without exceptions is found to be especially true in relation to nesting sites. It is most unusual for a Spotted Flycatcher to build in a hole in a wall, and for a Wren to form its domed nest in a box, yet I have obtained the former and my friend Frohawk the latter. That the Marsh-Warbler, therefore, should occasionally follow the habit of its very close relation the Reed-Warbler, is no more than might be expected.

The food of the Marsh-Warbler consists largely of insects and spiders, but it also eats elder-berries and small fruits in their season.

The Marsh-Warbler is said to reach its breeding-grounds about the middle of May, and to leave them late in August. Herr Gätke, speaking of it in Heligoland, says:—"This species * * * was in former years met with far more frequently in Heligoland than is the case now. As regards numbers, too, it was far better represented than the preceding species (the Reed-Warbler)—a relation which obtains even at the present day in regard to the few individuals still visiting the island."

"Further, before the period under consideration, the spring and summer months were almost invariably fine and warm, with a prevalence of south-easterly winds, so that in April and May of almost every year the island used to teem with *Sylviæ* and other small birds; indeed there were many days on which one might have been able to secure more than a hundred Bluethroats *(Sylvia suecica)*, and some twenty or more examples of *S. hypolais* and *S. palustris*. Since then, on the other hand, our spring and summer is almost always cold, with raw and dry winds from the north, and the number of these *Sylviæ*, and of other both smaller and larger species which put in an appearance at these seasons, has dwindled to the slenderest proportions, so that now the two last named species are seen perhaps not more than twice or three times in the course of a spring migration."

Although I have not heard of this species having been exhibited as a cage-bird in England, it is recorded among the species sent to the sixth exhibition of the "Ornis" Society in Berlin. Mathias Rausch, in the "Gefiederte Welt" for 1891, in an exhaustive article on the European Song-birds, states that this bird is very prolific in imitations of the songs of other species, frequently even more versatile than the Icterine Warbler, though in strength of voice, in purity and

flute-like character of tone, it stands a good distance behind it. Probably Herr Rausch bases his remarks chiefly on wild specimens; but it is quite possible that he may also have heard them in captivity.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE GREAT REED-WARBLER.

Acrocephalus turdoides, MEYER.

ACCORDING to Seebohm, the only satisfactorily authenticated instance of the occurrence of this species in our islands is one shot near Newcastle, on the 28th May, 1847, by Mr. Thomas Robson. Howard Saunders, however, evidently believes in three other British killed specimens, one shot near Wingham, in Kent, on September 14th, 1881, one near Ringwood, Hampshire, on June 3rd, 1884, and one shot near Sittingbourne, in Kent, at some unknown date: he also believes in the existence of a specimen which frequented the Norfolk broads.

As the species breeds annually at Calais, and is common both in Holland and Belgium, Mr. Saunders considers it a marvel that its visits to our shores are so rare. At best this can only be regarded as a casual wanderer to Great Britain.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE SEDGE-WARBLER.

Acrocephalus phragmitis, BECHST.

OCCURS in Norway up to lat. 70°, in Sweden and North Russia to lat. 68°, and in the valleys of the Obb and Yenessay to lat. 67°. Southward it breeds in North-west Turkestan, Palestine, Greece, and Central Italy, but in the South of Europe generally it is only known as a migrant, though it is believed that it sometimes breeds in Spain and the South of France: throughout the rest of Europe it is pretty generally distributed, and abundant in suitable localities. It visits Algeria and Egypt in the winter, passing thence to Damaraland and the Transvaal: it also seems probable, from the fact that Dixon shot the species in May in Algeria, that a few examples remain to breed there.

In Great Britain the Sedge-Warbler is more or less abundant everywhere, excepting perhaps on the Shetlands; it is, however, somewhat local in the extreme north.

Far more strikingly coloured than the Reed-Warbler, this well-known species has a general resemblance to hens of the Orange Weaver-bird *(Pyromelana franciscana)*: the general colouring of the upper parts is golden-brown, with black centres to the feathers; but on the head the feathers would be more accurately described as black, with lateral brown borders; on the rump and upper tail-coverts they are cinnamon reddish, without black centres; the secondaries are blackish with broad clear golden-brown borders; the primaries smoky-grey, narrowly and more or less distinctly edged at the tips with whitish; tail-feathers blackish, with whitish margins; a distinct broad pale buff superciliary streak; lores and ear-coverts smoky-brown; chin and throat white; centre of abdomen whitish; remainder of body below buff; upper mandible blackish-brown, lower mandible yellowish horn-brown, darker towards the tip; feet pale brown; iris bright hazel. The female is slightly duller than the male, and the reddish colouring of the rump and upper tail-coverts is less pronounced. Young birds have the breast transversely spotted with smoky-brown.

The Sedge-Warbler appears at its breeding haunts towards the end of April, or the beginning of May, and leaves us again in September or October. Although

SEDGE WARBLER

not always strictly confined to sedges and reeds, it is almost invariably to be found in the neighbourhood of water; * thus in Kent I met with it in numbers in a plantation which was frequently converted into a marsh by the overflow of a mill-stream, and in Norfolk, in lanes within a stone's-throw of the broads. Without question the best and most likely situations in which to look for the nest are in reeds and sedges, or in willows or hawthorns overhanging the water: and here I feel constrained to contradict a statement which has been made, respecting the situation of the nest, by several excellent observers and well-known Ornithologists. Seebohm and others assert that the nest of this bird "is never suspended between the reeds like the Reed-Warbler's, but is supported by the branches"; yet of the many nests which I took on the Ormesby broads in 1885 and 1886, nearly all were suspended precisely like those of the Reed-Warbler, several reeds being interwoven loosely into the walls of the nest, which was placed above the junction of a leaf in at least one of the said reeds. As seen from our boat, it would have puzzled the keenest observer to say to which species the suspended nest belonged, though a glance at the eggs at once settled the question. Of course when taken and compared side by side, that of the Sedge-Warbler is seen to be wider and shallower.

Sometimes the nest is built in a hawthorn hedge, sometimes in nettles at the foot of a hedge; and all those which I have discovered in the marshy plantation (part of which, when under water, was converted into a thousand tiny islets formed by the roots, and was most awkward to cross) were built amongst brambles, precisely in such a situation as would be chosen by the Garden-Warbler.

For many years I collected eggs, without troubling to take the nests, but eventually the importance of studying the variation of nests as well as eggs became impressed upon me, and during the few years in which I acted upon this conviction, I obtained amongst others some thirty or forty nests of the present species, from which I was able to select eleven fairly well-defined distinct types for my permanent collection, and an extremely pretty series they make, varying from a stoutly built structure of twigs, grass-stalks, feathers, wool, horsehair, and fibre, fully an inch and a half thick, to the flimsiest little fabric of goose-grass, fibre, wool, and the flowering heads of reeds: some nests seem to be made entirely of fine grass-stems, and much resemble those of the Greater Whitethroat, others are more like those of the Blackcap, and others again are almost Sparrow-like in their untidiness and in the careless use of white feathers in the walls, though scarcely so in form.†

* I have taken the nest as far as a hundred yards or more distant from water.

† I have a nest of the House-Sparrow taken from a Sand-Martin's burrow which is not much unlike this type, even in form.

As a rule the nest is deep and compact, constructed of dry grass, with a stalk or leaf of reed intertwined, also rootlets and very rarely a little moss; lined with black horsehair, soft feathers, and sometimes a little wool.

Although, as a rule, the ground-colour of the eggs of this species does not vary much more than in those of the common Partridge, some eggs are very heavily mottled with olive-brown; their number is from four to six, five being the almost invariable number for a complete clutch: the ground-tint is either greyish, buffish, or brownish stone-colour, and when mottled or zoned at the larger end, it is with a much deeper shade of nearly the same hue, amongst which, in the heavily mottled variety, are spots of a more slaty colour; but, whatever character the eggs assume, they almost always show one or more fine scribbled black lines at the larger end, in character somewhat similar to those which characterize Bunting's eggs.

The Sedge-Warbler, like its allies, feeds largely upon insects, their larvæ, small worms and slugs; in the autumn it is said also to eat elder-berries.

The song of this species, as a rule, is somewhat similar to that of the Whitethroat; it occasionally far excels the performance of that bird, as I shall presently show: it is most industriously persevered in, and although the Sedge-Warbler is somewhat shy and skulking in its habits, I have often seen it, when startled, rise singing above the sedges, and even alight and sing for a minute or so in full view; but generally it follows the rule that little birds must be heard and not seen: the alarm-note is probably a modification of the cry of the young for food, *churr, chuch-uch-uch-uch-churr;* a very common call among the smaller birds: the actual call-note I have not heard or have forgotten it; probably it is a soft pleasing whistle.

In July, 1887, I went down to see a brother naturalist, Mr. Edward A. Fitch, of Maldon, in Essex, and we discovered upon an island on his property a nest of the Sedge-Warbler, containing four young birds, in a blackthorn bush. The mother bird slipped off the nest into the neighbouring bushes at our approach, but the cock bird which was singing in one of the bushes continued his performance, the finest I ever heard from this species: Mr. Fitch was certain that no Sedge-Warbler could produce such a song, and expressed his firm conviction that the nest was that of the Blackcap, but I knew the nests of both species far too intimately to be deceived.

Seeing that the nestlings were ready to take, I determined to try my luck at rearing them; but, before I could put my hand over the nest, all the young scuttled out into the bushes, and both parents made their appearance in great wrath and scolded lustily; ultimately we secured two of the young. At first these

little birds proved extremely difficult to feed; as, for two days their mouths had to be forcibly opened for every mouthful, and had not my host's kind-hearted wife voluntarily assisted in feeding them, I should have been kept a close prisoner during the two or three days of my stay. After the second day the young birds became reconciled to their foster parent and opened their mouths readily enough.

At first they had hard-boiled egg and moistened bread crumbs, but after I reached home I gave them the same mixture upon which I had, that year, successfully reared Nightingales, and this they seemed greatly to relish: they were always hungry, yet grew very slowly. At the end of three weeks one of them died, but the other was completely reared; he was wonderfully tame, and whenever I entered the little greenhouse in which his large cage stood, he would fly down to the door and begin jumping up and down like an excited child, sometimes springing at the wires and bumping his breast against them in his eagerness to get some fly or mealworm which he spied in my hand.

I used to open the door, put my hand in and he would hop on to it and snatch the insect or larva from between my finger and thumb: he was a pretty little fellow and I grew very fond of him; but I am afraid, as is often the case with pets, that he was too well fed for his health, for on September 2nd, after completing his autumn moult, he had an apoplectic fit and died. In all probability, had this bird lived for years in captivity, he would never have sung a note; for I do not at all believe the parent's song heard only for the first eight or nine days of his life, would have been remembered, and I do not think the songs of the Warblers are inherited; they are heard and learnt by imitation either here or during the winter, after migration.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE AQUATIC WARBLER.

Acrocephalus aquaticus, GMEL.

ALTHOUGH this appears to be only a chance straggler to our shores, it is by no means an uncommon bird in France, and it is quite likely that, but for its close resemblance to the Sedge-Warbler, many more instances of its occurrence in Great Britain would have been recorded. It is, therefore, important that the present species should be admitted into the British list, so that all observers may be on the look-out for it. Its geographical distribution, according to Seebohm, is as follows:—"It has never been found north of the Baltic, and is only known to pass through Spain on migration. It is a regular, though local, summer migrant to France, Italy, Germany, the Netherlands, and South Denmark. South of the Danube it is only known to pass through on migration, a few remaining during the winter in Greece and Asia Minor. In South Russia, Goebel found it rare in the valley of the Dnieper; and Nordmann once obtained it at Odessa in spring. Bogdanow did not meet with it either on the Volga or in the Caucasus; but Meves found it abundant in the marshes of the Southern Ural, which, so far as is known, is its eastern limit. It is said to winter in the Canary Islands, and in various parts of North Africa; but our information respecting its winter quarters is very meagre. There is no doubt that a considerable number remain to breed in Algeria and Tunis."

In Great Britain the Aquatic Warbler has been shot at Dover; at Hove, near Brighton; and at Loughborough, in Leicestershire; it was also represented in "Hunt's British Ornithology," in 1822.

The upper surface of the Aquatic Warbler is tawny-brown, the forehead reddish-buff; a buffish-white superciliary stripe from the base of the bill almost to the nape; the crown above this stripe blackish-brown, divided down the centre by a stripe of buff; feathers of nape and back black-striped, and all the remaining feathers excepting the quills black-centred; lores and ear-coverts pale-brown; under surface of body buff, paler in summer; the flanks (which are more distinctly buff) the neck and lower throat more or less striated. Bill dark-brown

AQUATIC WARBLER

PLATE 3

above, paler below; feet yellowish horn-brown; iris hazel. After the autumn moult the plumage becomes more fulvous.

The Aquatic Warbler is a bird of the swamps, haunting the sedges and smaller patches of reeds in dykes, ponds, the margins of lakes or rivers; like the Sedge-Warbler it is a timid skulking bird, always ready to drop out of sight into the sedges at the least alarm; like that bird also it does not confine itself strictly to aquatic vegetation, but is also found amongst wild and tangled scrub and thorn.

It is said that this bird never hops, but runs almost like a mouse; it is extremely active like all the other Reed-Warblers; its song though somewhat like that of the Sedge-Warbler is inferior in tone, length, and execution.

The nest, according to Naumann is never situated amongst reeds over the water, but is usually placed in a bunch of sedge, or some other aquatic plants about a foot or less above the ground, or in dwarf thorn or willow overgrown with rank herbage; it is suspended from the stalks or twigs of the growth in which it is situated, and these, as with the Sedge and Reed-Warbler's nests, are interwoven with the walls. In appearance the nest much resembles that of *A. phragmitis*, but is said to be slightly smaller; * in its materials it doubtless varies quite as much; but the basis of the nest, as with that species usually consists of dry grass and rootlets, and the inner lining is said to be invariably finished off with horsehair.

The eggs number from four to five, and are indistinguishable from those of the commoner species.

The breeding season begins about the middle of May, and fresh eggs are obtainable before the end of that month.

Herr Gätke makes the following interesting remarks respecting the Aquatic Warbler in his "Birds of Heligoland":—"The distribution of this species as a breeding bird is scarcely as yet ascertained to its full extent; at any rate, the conditions under which it makes its appearance here are not in harmony with the statements made in regard to its breeding area. The nesting stations cited for this species are Algiers, Italy, France, Germany—especially the west—Holland, and in solitary instances in Sleswick-Holstein, and Denmark.

From the frequent, and in one case at least, very numerous appearances of young birds during the autumn migration, and their complete absence in the spring—I have only once obtained a bird in April—we may with safety conclude that, so far as Heligoland is concerned, the species is a far Eastern one. This conclusion received considerable support from the fact that, on the 13th of August,

* But, as the nest of the Sedge-Warbler varies in diameter from 3½ to nearly 5 inches, the comparison is not of much value.

1856, when these birds appeared here in unprecedented numbers, another species from Eastern Asia was taken—viz. *Sylvia certhiola*. Again, during September, 1876, when several individuals of *S. aquatica* were seen and shot here, a very strong migration of eastern species took place. Thus, on the 4th, 6th, and 15th, and daily from the last date to the end of the month, *Anthus richardi* occurred in numbers from five to twenty; on the 22nd two examples of *Anthus cervinus* and one of *Motacilla citreola;* on the 25th two examples of *S. aquatica* were shot, and one example each day of *S. superciliosa* on the 26th, 29th, and 30th. Similar occurrences were repeated in the course of October."

Herr Mathias Rausch, in his article on European Song-birds, mentions this species with others, as "not prominent as singers, and for that reason not particularly beloved and in demand as cage-birds." At the same time, it must be remembered that numbers of little tropical birds, in no respect remarkable for song, and certainly no more beautiful in colouring than the Aquatic Warbler, are to be found in almost all bird-rooms: moreover somewhat high prices are paid for the species of White-eyes *(Zosterops)* and their only recommendations are their pretty quiet colouring and graceful activity.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE GRASSHOPPER WARBLER.

Locustella navia, BODD.

NOWHERE common, though in suitable localities not so rare as its shy disposition would lead one to imagine, this species appears to be generally distributed over Western Europe, and eastward as far as Transylvania, and South-western Russia; northwards its range extends to St. Petersburg. In Italy it is rare; but in Spain, only in the summer; it is believed to winter in Morocco and Algeria.

In Great Britain it is pretty generally distributed throughout England and Wales; in Ireland it is somewhat local, breeding chiefly in the eastern and southern counties; in Scotland, south of the Firth of Forth, it breeds in varying numbers.

The colouring of this species above is olivaceous-brown, each feather with a dark centre, least conspicuous on the sides of the neck and the longest upper tail-coverts; quills and tail-feathers brown, with their outer webs olivaceous towards the edge; the tail faintly barred; under surface pale buffish-brown; the chin, centre of abdomen and under tail-coverts almost white; the neck and breast-feathers with darker centres, and the under tail-coverts with brown shaft-streaks; bill dark brown above, paler below; feet pale brown; iris hazel. The female closely resembles the male; but young birds are more tinged with buff on the under surface than adults.

Every writer on British Birds informs us that this bird owes its name to the resemblance which its song bears to the chirrup of the grasshopper; but Macgillivray correctly says:—"The note, if once heard, can never be afterwards mistaken for the sound of a grasshopper or cricket, however striking the resemblance; besides the length of time for which it is continued, provided the bird be not disturbed, is much greater. Thus, on one occasion, while watching some pike lines by the margin of a deep pool, I heard the trill of the grasshopper chirper emitted from a neighbouring hedge for at least twenty minutes, during which time the bird appeared to have been sitting on the same spot."

As Seebohm observes, the song "is a rapid trill, absolutely monotonous, and is continued from a quarter of a minute sometimes to a couple of minutes without cessation": this is not characteristic of the *tizzik*, *tizzik*, *tizzik* of a grasshopper; indeed the note of the bird merely suggests that of the insect, it does not greatly resemble it.

The Grasshopper Warbler haunts copses and plantations where there is dense and rank undergrowth, untrimmed hedgerows, and ditches overgrown with coarse grass, nettles, &c.; also gorse-clad commons, heathery moors, and bushes in marshy land, but rarely reeds. The nest is usually concealed in a thick tuft of rank grass, and so deep down that, on the only occasion when I flushed the bird (which was early in my birds'-nesting days) I failed to discover it: consequently I am indebted to the Rev. W. Bree, of Coventry, for an egg of this species, and to the late Jenner Weir for a nest containing eggs. Sometimes the nest is placed in the bottom of a grassy ditch, on railway banks, or under whin-bushes.

When disturbed, either from the nest or from cover, this shy bird is only seen for a moment, it disappears like a mouse; or, in some cases, like a stone;

dropping from its perch into the undergrowth, through which it rapidly glides away. In Mr. A. W. Johnson's notes, quoted by Seebohm, we read:—"The sitting bird usually flies off the nest very quietly when flushed, and drops into the underwood at once. One instance, however, came under my notice, where the bird flew up and over some tall trees; and if the eggs are hard sat, or the nest contains young, the bird comes stealing back in and out amongst the grass like a mouse, and will approach within a few yards."

Mr. Howard Saunders says that neither Mr. A. H. Evans nor he have noticed the mouse-like action of this bird when flushed from the nest; but I was specially struck with it on the one occasion when I ought to have found the nest, and once again in a wood in the Stockbury Valley, in Kent, when I burst suddenly into a clearing, almost stepping on the male bird, which was uttering its creaky song in a bush just ahead of me; I wasted much time then searching all around for a nest, which I never found.

The nest is a deep compact cup formed of moss, dry grass, and a few dead leaves, with an inner lining of finer grass: the eggs, which number from four to seven, are pinky-white, speckled with blood-reddish brown, and with greyer shell spots; sometimes the spots are enlarged, so as to form a zone towards the larger end, occasionally they are interspersed with short Bunting-like hair lines of dark brown; and, very rarely, they are diffused and merged, so as to form a uniform pale brownish tint over the whole egg.

The alarm-note of the Grasshopper Warbler is said to be *tic, tic,* or *tic, tic, tac;* more probably *tzic, tzic:* but—Is it the alarm-note? Surely, when a bird is flushed from its nest, it must feel frightened; but I believe most, if not all, observers who have disturbed the Grasshopper Warbler when sitting, could echo Seebohm's words—"We never heard her utter a note." I am certain that the greatest confusion exists respecting the call and alarm-notes of wild birds in the accounts given by even the best observers, and when a good man mistakes the intention and meaning of a note, every subsequent writer follows his lead.*

The food consists chiefly of insects, their larvæ, and spiders, but it is possible that in the autumn it may also eat soft berries and small fruits.

Sometimes the Grasshopper Warbler is double-brooded, the first nest being usually completed about the second week of May, and if a second is built it is generally ready for eggs towards the end of July. Nests have frequently been

* I remember being amused one day, when looking through a work by an eminent Ornithologist, and reading his account of *Liothrix lutens*, to come across the statement that "its call-note is a harsh chattering;" the fact being that the chattering indulged in by both sexes is simply scolding; the call-note of the male being a short and very musical song, of from seven to nine notes, and that of the female a single clear resonant whistle repeated four times.

found with fresh eggs about the middle of June, but it would seem probable, in such cases, that some mischance had befallen the first nest.

Lord Lilford gives an amusing account of his search after this bird and its nest; he says:—"The only close observations of this bird which I have hitherto been able to carry out, were made in the early summer of 1856, on a rough piece of furze and thorn-grown grazing-land adjoining Dartmoor, in North Devon: there I found the bird very common. I should say that there must have been at least six or more pairs frequenting an area of perhaps twenty acres, but in spite of their abundance and constant song, it was only by close watching in the early morning that I was able to procure specimens for my collection: the male bird at that time will now and then creep out to the top of a furze-bush 'reeling' or singing, and if undisturbed perhaps remain for a minute or more, but on the slightest alarm will disappear into the thickest covert he can find, and run like a mouse through the most tangled herbage from one thicket to the next, never taking wing unless absolutely forced to do so. In vain did we search for a nest, though armed with a bill-hook, and protected by garden-gloves, we plunged into masses of thorns, furze, nettles, thistles, and other defensive vegetation into which we had after patient watching traced one of these birds, tearing up the grass by handfuls, lopping away live and dead furze, on hands and knees, morning, noon, and evening; day after day we went home with perforated skins, perspiring and unsuccessful." Birds of Northamptonshire, vol. 1, p. 123.

I could not resist quoting this; it is so true an account of the discomforts to which the zealous birds'-nester cheerfully submits; and, after all, I am not sure that part of the joy of this branch of collecting does not consist in the successful battling through thorns and briars, even though, after the fray, you return home with both clothes and skin in rags.

As a cage-bird I should not recommend this species.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

SAVI'S WARBLER.

Locustella luscinioides, SAVI.

SAVI'S WARBLER is a witness to the unquestionable fact—that no Wild Birds Protection Act which does not forbid the reclaiming of so-called waste land, will avail to hinder the rapid decrease of our British Avifauna; interference with the liberty of Britons will not affect it one iota: most of our interesting birds are doomed, sooner or later, to banishment; for they will only breed in their accustomed haunts; and where the proper conditions, to which they are used, cease to exist, they will not remain. So long as gardens remain we shall probably retain some of the commoner species, such as the Thrushes, the Robin, Hedge-Accentor, and Tits, the Garden Warbler, Spotted Flycatcher, and a few others; but the birds of the fens, marshes, moors, and forests, must eventually recede before the steady increase of bricks and mortar.

This marsh-loving bird is found in the larger reed-beds of South Russia, Austria, Italy, Holland, the south of France, Spain, North Africa, and Palestine: in the delta of the Rhone, and in North Africa it is probably a resident species, but in its more northern haunts it is a migrant.

In Great Britain, Savi's Warbler has probably become extinct; between the years 1843 and 1856 a good many specimens, together with nests and eggs of this species, were obtained; but the last British example was shot on Surlingham broad, on June 7th, 1856, and passed into the collection of Henry Stevenson, the well-known author of the "Birds of Norfolk." The fens of Norfolk, Cambridge, and adjoining counties were previously resorted to by this rare little bird.

The upper surface of Savi's Warbler is russet-brown; flight-feathers slightly darker; tail-feathers with slight indications of transverse bars; under parts brownish-buff; the throat and centre of abdomen white; under tail-coverts redder, with slightly paler tips; bill dark-brown above, paler below; feet pale brown; iris hazel. The young are described as less rufous above and paler below than adults.

Mr. Stevenson states that the marsh-men of Norfolk know this bird under the title of the "red craking reed-wren"; he took down the account of his specimen as given by the man who shot it as follows:—"Being engaged on the broad all

H. Grunvold

night, he first heard the bird 'noising' about nine o'clock in the evening, on the 6th of June, and observed it from his boat running up and down the dead reed stems, from the tops of which it kept calling at intervals until two in the morning. He then returned home, but at six o'clock he again found it in the clump of reeds, though more restless and calling incessantly. Soon after this the wind began to stir the reeds, and it then dropped down and remained silent among the thick sedges. Up to this time he had imagined it to be a Grasshopper Warbler, although the note seemed unusually loud and clear, and like them it kept moving its head from side to side whilst singing. On the following evening, at eight o'clock, the bird was still in the same place calling as before, and as one or two of the Grasshopper Warblers were singing at the same time, he distinguished at once a difference in their notes. As soon as he had shot the bird, he saw that it was different to any he had handled before, and observing that it remained so long in one spot, made every search for a nest, but could find no trace of one. About ten years ago, he assures me there were several couple of birds on the broad with similar notes, and he then found a nest with eggs, which, from his description, might be either that of Savi's or of the Grasshopper Warbler. About the first week in May of the following year, a bird, agreeing exactly in note and appearance with the above, was also seen by this marsh-man in a small sallow bush; not having his gun with him, he watched it for some time, and had no doubt of its identity."

The above account describes the habits of this species very accurately, as may be seen when it is compared with the accounts of other observers. The song is a monotonous trill, higher in pitch than that of the Grasshopper Warbler; it is usually sung from the top of a reed: the call-note is said to be *krr*.

The nest is placed upon a heap of tangled sedge leaves, and is carefully concealed in sedges, reeds, or rush; it is composed of interwoven leaves of broad grass or sedge, with narrower leaves for a lining; it is very neatly made, unusually deep, and is said to resemble a miniature nest of the Little Crake. The eggs, four to six in number, are white or pale buff, speckled with ashy-brown surface spots, and violet-grey shell-spots; the markings are most numerous at the larger end, where they frequently form a zone; dark hair-like Bunting lines are also sometimes present.

Although this species is naturally of a skulking disposition, and, when alarmed, drops down into the sedges for concealment, Count Wodzicki states that "both male and female sit on the nest, and allow themselves to be watched without leaving it. If frightened off, they soon return." The nest appears to be built by the male bird, although both sexes collect the materials.

The food of Savi's Warbler is believed to consist entirely of insects and their larvæ; doubtless spiders are also eaten by it as by all other Warblers.

The flight of this bird is said to have the same character as that of a Wren.

As a cage-bird I should imagine that, excepting for its rarity, Savi's Warbler would be more irritating than interesting; on clear days its monotonous trill is said to be almost incessant. I once had a Canary which had been hand-reared, and had therefore not learned its proper song: this bird never got beyond a high-pitched key-whistle, or monotonous trill; when it died I cannot say that I very deeply regretted my loss: at the same time even this apology for a song was heavenly music compared with the incessant wheel-screeching of a pair of Rosy-faced Love-birds, and anyone who had passed through a week of torment such as I once experienced from these discord-producers, might perhaps sit down and listen to Savi's Warbler with a beaming countenance.

Family—TURDIDÆ. *Subfamily—SYLVIINÆ.*

THE RUBY-THROATED WARBLER.

Calliope camtschatkensis.

MR. JOSEPH P. NUNN, in the "Times," of December 3rd, 1900, stated that he saw two wild specimens of this bird at Westgate-on-Sea, in October of that year.

HEDGE-SPARROW

Family—TURDIDÆ. *Subfamily—ACCENTORINÆ.*

THE HEDGE-SPARROW.

Accentor modularis, LINN.

EXCEPTING in the extreme north of Europe, this species breeds pretty generally; in Norway to the forest boundary and to the east up to 60° N. lat., but in the north it is rarely found during the winter, migrating thence in autumn to Southern Europe, and occasionally to North Africa. South of the Baltic and westwards to Northern Spain and Portugal it is generally distributed during the summer; a few breeding in the mountains of Italy, as well as Asia Minor, Palestine and the Caucasus: in the Lebanon and in Arabia Petræa it also occurs in winter.

In Great Britain, excepting in the more exposed northern islands, it is generally distributed and abundant.

The upper surface of the head is smoke-grey (slightly washed with buff in the female) and streaked with dull blackish-brown; on the neck and shoulders the grey becomes a pure bluish-ash; the back is rufous-brown, broadly streaked with black; but the rump and upper tail-coverts are golden-olivaceous and not streaked; the wings are dark-brown, all the feathers more or less broadly edged externally with rufous-brown; the tail-feathers are similar, but tinted externally with rufous or olivaceous-brown; lores and ear-coverts brown; chin, throat, sides of neck, and breast bluish-ash; lower breast and abdomen in the centre whitish-ash; under tail-coverts buffish-white, with brown streaks; flanks olivaceous-brown, with dark-brown streaks; bill pitchy-brown, the lower mandible slightly paler; feet horn-brown; iris hazel. The female is paler and has the bill slightly longer than in the male, the crown and flanks with more defined streaks. The young have no grey on the head or throat, but are altogether browner and more spotted than adult birds.

The popular name of this common bird being objected to by many writers, as being likely to mislead the ignorant, the names of "Hedge-Accentor," "Shuffle-wing," "Dunnock," "Dykie," "Molly," and "Smokie" have been used in preference (the majority being local appellations); but, when one considers that the term Sparrow has been applied to numerous other members of the Order Passeres, such as Serins of the genus *Sycalis*, Grass-finches of the genus *Steganopleura* and

Mannikins of the genus *Munia*, it seems hypercritical to reject a name which is generally understood.

The Hedge-Sparrow is one of those familiar birds which will never desert us, for it is just as happy in gardens, orchards, groves, shrubberies, plantations, and hedges, as in the dense undergrowth of copses and woods. In the winter, like the Robin, it seeks the habitations of man, and takes advantage of the refuse food flung out for its sooty and more vulgar namesake: it is one of the first songsters heard in suburban gardens, and helps to enliven the wet dreariness of February. The song itself is not very remarkable for execution, but is bright and clear, somewhat jiggy, if one may use such an expression, less plaintive and varied than that of the Robin, and not so musical as that of the Wren: it consists of very few notes; but these are made the most of, so that the effect is decidedly pleasing: also in mild winters it may be heard at times when most other birds are silent.

Like the Chaffinch, the Hedge-Sparrow both runs and hops; on the ground it almost invariably runs with its head depressed as if constantly on the look out for food, and when it catches sight of a spider or a seed it hops forward, shuffling its wings with a curious rapid action characteristic of its Subfamily. When passing down a garden path this bird generally keeps close to the border, dodging now and again under a shrub with a business-like action which almost reminds one of a mouse: it is rarely seen in lofty trees, but seems rather to prefer shrubs and hedges, amongst which it drops from branch to branch, peering about like a Tit for insect food.

The nest of the Hedge-Sparrow has more frequently been represented by artists than that of any other species, and yet the form selected for illustration is one which many a zealous birds'-nester has never met with—a perfect cup of very fine bents, root-fibre, and moss, thickly lined with black horsehair, a little fibre, and one or two soft fluffy feathers: one nest of this character I found on May 1st, 1884, and it is the only one of its kind I have ever seen. The nest is always warm and cosy in appearance, rather deep, the outer walls being generally enclosed in a framework of coarse twigs, rough roots of couch-grass, or thick grass-stalks, and occasionally fragments of dead furze; the walls themselves are thick, and somewhat loosely formed of green moss, frequently intermixed with bents, and sometimes a little sheep's wool; the lining consists of hair, fine fibre, and often a little wool, and a small soft feather or two. Very rarely nests may be found in which there is no moss, but in most nests this material is very freely used.

The position of the nest varies a good deal, but is rarely found at more than four or five feet from the ground; it is very frequently built in a hawthorn

hedge, but I have taken it from the branches of sapling trees in thickets, from furze-bushes, evergreens, brambles, faggot-stacks, ivy growing on a wall, and from a tuft of grass on the ground, where it exhibited a curious appearance, as the dead grass-stalks forming the upper part of the framework were so arranged as to form an irregular pentagon; although this nest only contained one egg I could not resist securing it as a curiosity. In 1887, Mr. A. E. Shaw recorded the discovery of a nest of this bird built in a cabbage, and Mr. Gray, in his "Birds of the West of Scotland," mentions a nest placed at the base of a hart's-tongue fern on a ledge in a cave at Ailsa Craig.

The eggs of the Hedge-Sparrow are so conspicuous that every rustic and schoolboy is perfectly familiar with them; they vary in number from four to six, but five is a number rarely exceeded; in colour they are of a beautiful turquoise blue and unspotted; in form usually a very perfect oval; they do, however, vary very considerably in form, although the extreme variations of a very long pear-shape and an almost perfect sphere are not often met with; nevertheless, by diligent search, I have taken both types, which are figured on pl. VIII. of my "Handbook of British Oology," and again in the present work.

It is well-known that the nest of the Hedge-Sparrow is one of the Cuckoo's favourites; this is curious, because the egg of this parasitical bird is, as a rule, utterly unlike that of the *Accentor;* Mr. Seebohm's fine series of Cuckoo's eggs nevertheless contains a variety resembling those of the Hedge-Sparrow, excepting in its superior size.

Seeing that *Accentor modularis* did not object to incubating an egg so utterly unlike its own, I once tried the experiment of putting two Whitethroat's eggs into a nest in a hawthorn hedge which closed the end of my last garden. It was no good, the alien eggs were simply thrown over the side and the nest deserted, proving clearly that the Hedge-Sparrow is not colour-blind: it will submit to the deposit system of the Cuckoo, but will not have anything to do with loans from other species.

Frequently commencing to breed in March, it is not to be wondered at that this bird should frequently produce three broods in the year; the abundance of the species is therefore easy to understand, although its absolute hardiness and the ease with which it accommodates itself to change of diet may have something to do with it. Its natural food consists largely of insects, spiders, worms, and seeds of weeds; but, in confinement, like its cousin the Pekin Nightingale, it may gradually be accustomed to live upon a seed diet alone.

Mr. Stevenson, in his "Birds of Norfolk," says:—"With myself the Hedge-Sparrow has been always an especial favourite, from its gentle unobtrusive nature,

assimilating so well with the neat russet and grey of its finely marked though quiet plumage; retiring, yet not shy, and, if never quarrelsome, still always 'holding his own,' even with the pert Sparrow and still more saucy Redbreast."

Mr. Stevenson is mistaken in thinking that the Hedge-Sparrow is not quarrelsome; I have seen it disputing vigorously with a Skylark, in the open, for the possession of an insect, and a hen bird which I kept for several years in an aviary killed several Titlarks and finally robbed a pair of Yellow-Hammers of their nest, in which she deposited a full clutch of infertile eggs, and sat steadily upon them until, at the end of a fortnight, I removed them.

Another point in which I differ from this author is, that he speaks of the Accentor as singing as sweetly in an aviary as out of doors. Of the many birds which, from time to time, I have kept, not one ever made the slightest attempt at singing. Since I first published this statement, it has been contradicted by a well-known Aviculturist; therefore, in the winter of 1905-6, I caught two cocks and one hen of the species; turned the pair into one aviary, and the solitary cock into another, and awaited results. Of the pair, the cock was absolutely silent all the summer, but the solitary bird gave one indication of its ability to sing, and only one, about midsummer; he has been perfectly quiet ever since, though in excellent health. When first caught few birds are more wild, and they show their wildness in an idiotic manner which is simply exasperating, spending the whole day, excepting when feeding, in flying perpendicularly from the earth to the roof, in one corner of the aviary, and dropping back headlong: sometimes it takes three or four weeks before they abandon this senseless acrobatic performance.

In a cage the Hedge-Sparrow becomes comparatively tame in a few days; but then it is far more liable to the distressing ophthalmic disease referred to by Stevenson, than it is in an aviary; moreover, being extremely restless, it hops incessantly from perch to perch—*click-clack*, *click-clack*, "doing the pendulum trick" as I used to say; a performance most irritating to one's nerves.

The only sound often heard from my Hedge-Sparrows was a sharp and rather short high whistle, which I took to be the call-note; and, what with their stupidity, pugnacity,* and sulky silence in captivity, this species is, in my opinion, the very worst subject for aviary life. In the garden and the country it is charming; but, as a pet, contemptible.

I once tried rearing this species from the nest, but made the mistake of feeding upon hard-boiled egg and sweet biscuit: the young should certainly have been fed principally upon moistened ants' cocoons and cut up mealworms, or small caterpillars.

* One of my males fought a Robin, until he became a perfect scarecrow, and had to be liberated.

ALPINE ACCENTOR ♂ ♀

PLATE 35

Family—TURDIDÆ. *Subfamily—ACCENTORINÆ.*

THE ALPINE ACCENTOR.

Accentor collaris, SCOP.

CURIOUSLY enough, although this bird is only an occasional straggler to Great Britain, I caught a specimen in my garden at Penge about the year 1883. At the time I did not know what to make of it; and, not being aware of its rarity, I never recorded the capture: indeed I supposed then that it might be only an unusually large, brownish, and somewhat aberrant variety of the Hedge-Accentor: it was evidently a young bird, as the white throat-patch was barely indicated. So far as I can remember, I caught this bird in September; I know that it was just when the bird-catchers were bringing Linnets and Goldfinches for sale. The bird was abominably wild, knocked itself about in a cage, finally got a growth over one eye, and died in such poor condition that I never thought of preserving the skin: had I then known its value, I should have saved it in proof of my statement, and certainly kept it when alive in a large cage by itself; whereas it had two Hedge-Accentors as companions; the latter, by the side of their rare relative, looked insignificant, much as a Song-Thrush by the side of a Missel-Thrush.*

This species has its home in the mountains of South-western Europe, Asia Minor, the Caucasus, and Northern Persia. In Great Britain it has been chiefly met with in the southern counties; having been known to occur in Cambridgeshire, Suffolk, Essex, Surrey, Sussex, Devonshire, Somersetshire, Gloucestershire, Wales, and Yorkshire.

The adult bird has the crown and nape smoky-grey, with darker stripes; the remainder of the upper surface brown, with darker shaft-streaks; rump slightly paler than the back; median and greater wing-coverts brown, varied with black, and tipped with white; quills and tail-feathers dark-brown, tipped with buff; ear-coverts grey, with darker stripes; chin and throat white, with black spots; breast,

* In recording these facts now, I am perfectly well aware that many scientific Ornithologists will only curl their noses in scorn, believing that I am either drawing upon a vivid imagination, or talking of some common species which I imagined to be an *Accentor;* but those who know me intimately, will give me credit for an excellent memory for form and colouring.

centre of abdomen, and under tail-coverts smoky-grey; flanks chestnut, with buffish edges to the feathers; bill with the upper mandible mostly black, base yellowish; lower mandible yellowish, black at the tip; feet flesh-brownish; iris hazel. Young birds have the plumage spotted with rufous, and the white on the throat is wanting.

Gätke says:—"This interesting native of the mountains has not considered it beneath his dignity to leave his Alpine home in order to find a place in the group of distinguished visitors to little Heligoland. I have obtained the bird on three occasions: two individuals in spring plumage in May, 1852 and 1870, and one in autumn plumage in October, 1862. Apart from these instances, there is certain proof of its having been seen on two other occasions, but the birds in question could not be shot on account of their extraordinary shyness."

Seebohm, on the authority of various observers, states that the "Alpine Accentor is a summer visitor to the grassy slopes where a brilliant arctic flora, watered by the ever-melting ice, covers the ledges of the rocks and the little plateaux amongst the boulders, between the highest limit of forest-growth and the lowest boundary of perpetual snow. Its migrations, however, are very limited. When its breeding-grounds are covered with snow it descends into the valleys, and in severe winters will sometimes wander further from home and be seen in unwonted localities. Except, perhaps, when actually engaged in the duties of nidification, it is a more or less gregarious bird."

On the earth this bird both runs and hops, like the Hedge-Accentor; it certainly does *not* "drop its head and the fore part of its body suddenly, at the same time jerking its tail and drooping its wings." It is an exceedingly nervous bird, more so than the Hedge-Accentor. The call-note is described variously as a plaintive *tree*, *tree*, *tree*, and *tri*, *tri*, *tri*: so far as I can trust my memory it is *tswee*, *tswee*, *tswee*; I am sure it is neither of the others, because no bird but a talking species could utter such sounds.

Seebohm describes the song as a rich liquid *chich*, *ich*, *ich*, *ich*; but it is also said to sing like a lark.

Towards the end of May the nest is formed under a rock or bush upon the earth; it is a neatly constructed cup, consisting of dry round grass-stalks, interwoven with rootlets and lichens, and lined with fine moss, wool, hair or feathers. The eggs vary in number from four to five, and are pale turquoise blue in colour.

It has been stated that this species is double-brooded, the second nest being constructed about the middle of July; and, although there is no absolute proof of this, it is exceedingly probable.* According to Count Wodzicki, it breeds in

* It is well-known that the Hedge-Accentor nests twice and sometimes three times a year.

colonies of from twenty to forty pairs, in which respect it differs very greatly from the Hedge-Accentor.

The food of this species in spring consists of insects, their larvæ, and doubtless of spiders and centipedes, as is the case with all other insect-eating birds; in autumn it eats various small fruits, and in winter seeds of grasses and other weeds.

In Germany this species has been kept as a cage-bird, four examples having been exhibited at the sixth show of the "Ornis" Society, in Berlin. Herr Mathias Rausch also remarks that "its song indeed is not specially full of variations, and in its imitations is chiefly limited to the Crested-, Sky-, and Wood-Larks; at the same time it is of importance for aviculture, and therefore is gladly kept and cherished by fanciers."

This is all very well for those who only keep a bird in order to hear its song; but it is infinitely more interesting to watch its habits, and to do this properly the bird must be turned loose into an aviary.

Knowing what I do of the sneaking spitefulness of the common Hedge-Accentor, when associated in an aviary with other birds, I should be very chary of turning in the larger and more powerful Alpine species.

In a cage this bird runs like a Chaffinch, or like the Hedge-Accentor, and although I did not see it before it entered my box-trap, I do not hesitate to affirm that I am certain it ran (as well as hopped) in my garden.*

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* When one is at a distance from the birds it is the slinking run, as well as the wing motion, which at once distinguishes the Hedge-Accentor from a true Sparrow.

FAMILY CINCLIDÆ.

WE now come to the second family of the Passeres, represented in Great Britain by one resident species only, belonging to the typical genus *Cinclus*.

All Ornithologists do not, however, agree with Mr. Howard Saunders as to the validity of the family *Cinclidæ*; for Mr. Seebohm placed the Dippers among the Thrush-like birds *Turdinæ*, stating that they "may be distinguished from the true Thrushes by their short concave wings fitting tightly to the body, and their dense plumage adapted to their aquatic habits."

On the other hand, Dr. Sharpe refers *Cinclus* to the end of the Subfamily *Troglodytinæ* or Wren-like birds, a group which they certainly resemble in their domed mossy nests and white eggs, and to which also they have a slight likeness.

Perhaps, until the Doctors of this science have definitely established the natural position of the Dippers beyond all dispute, by careful dissection of their clothing, body, bones, and (having completed the dry bones) of the life-history, including song, call-note, alarm-note, and note of indignation; until, I say, all this has been done, perhaps it will be most convenient to regard the Dippers as constituting a distinct family.

As in the Wrens, the wings and tail are short, the first quill being very short, the outer toe of the tarsus is also connected at the base with the middle toe; but the bill is somewhat different, the tip of the upper mandible being slightly curved over, whereas that of a Wren is pointed; altogether the *Troglodytine* characters are very strong, and Dr. Sharpe gives us yet another, as follows:—"The principal characteristic, however, of a Wren, and one that separates it from the true Timeliine birds, is the almost entire absence of rictal bristles,"—"for Ornithologists who doubt that *Cinclus* is a Wren, an examination of the bill alone will be sufficient to show that its place is with the *Troglodytinæ*."

Family—CINCLIDÆ.

THE DIPPER.

Cinclus aquaticus, BECHST.

COMMON and widely distributed though this conspicuous bird is, I have never met with it in a wild state since I first began to study the class *Aves:* it is likely enough that prior to that period I may have seen it in some of the wilder parts of Devon without taking special note of the fact.

Dr. Sharpe (Catalogue of Birds, Vol. VI) says:—"The common White-throated Dipper is widely spread over Central and Western Europe. It has been said to occur in the Faroes, and is found throughout Ireland in suitable localities, as well as Scotland with the Hebrides, and breeds in the northern and central counties of England, as well as in Wales and the south-western counties. In other counties it is an accidental visitor.

The upper surface of the Dipper is slaty-grey, each feather with a dark-brownish margin, but the head and nape are wholly brown, wings dark-brown, the quills with greyish edges; tail greyish-brown; chin, throat, and front of breast white; remainder of under parts chestnut-brown, passing into dark smoky-brown on the flanks, thighs, vent, and under tail coverts; bill black; feet brown; iris hazel.

The female is very like the male, but is said to be darker on the flanks and under tail-coverts. The young are greyer above, and show no chestnut-brown on the under surface.

Seebohm says:—"The haunts of the Dipper are exclusively confined to the swift-flowing rocky mountain-streams. On these he is found all the year round, in places where the waters now curl over hidden rocks, or dash round the exposed and mossy ones, and toss and fall in never-ceasing strife. The banks must be rugged also to suit the Dipper, all the better if in the rock-clefts a few mountain-ashes and birches have gained a good hold. But a Dipper is not a bird of the branches. You will make your first acquaintance with him most probably as he dashes rapidly from some water-encircled rock, or as he shoots past you uttering his sharp but monotonous call-note, to alight on some distant stone, or mayhap seek the boiling current itself, to astonish and amuse you by his aquatic gambols.

The Dipper is also found on the barest of mountain-torrents, places where not a tree or shrub is found, where the waters roll and tumble in wildest mood across the heathery moors and down the bare mountain sides.

The Dipper seeks much of its food under water, in which it dives and swims with ease. Lord Lilford, after confirming the statement of other observers—that this species, unlike the Kingfisher and other diving birds, does not take a header, observes:—"The Dipper sinks, if I may say so, horizontally, and, as may be supposed, seems to have a good deal of trouble to keep below. These birds will go down in the most rapid streams and boiling pools below a waterfall, and, emerging with a jerk, fly off to a big stone, set up a short but very sweet song, and resume their subaqueous explorations. All their movements are sudden and rapid; they seem to be always in a hurry, and are eminently in keeping with the character of the streams which they frequent, and to which they add a great attraction."

"The song of the Dipper, though not very powerful, is very pleasing, and is associated in my mind with many delightful reminiscences of wild mountain and river scenery in our island and abroad. The male bird sits jerking his tail, and warbling often amidst a whirl and roar of rushing waters, and, in manner, reminds one a great deal of the Common Wren; the song is continued throughout the winter months."

The nest of the Dipper, or "Water Ouzel," as it is sometimes called, is a domed structure; a hollow ball of moss, sometimes interwoven with grass and with an entrance-hole in front and low down; the inner lining is firmly compacted of twigs, dry grass, rootlets, and dead leaves. The site chosen for the nest is in a mossy bank, a hole in a rock, wall or bridge, or among the mossy roots of trees overhanging water, not infrequently on a rocky ledge behind a waterfall. The building commences early in April, and at least two broods are reared in the year. The same nest is sometimes used twice in a season. The eggs, four to five in number, are pure white, beautifully oval, slightly less glossy than Thrush eggs, but too smooth to be chalky in appearance (like unspotted eggs of the Wren); in size they agree pretty nearly with eggs laid by the Song-Thrush in its first season; but they are more perfect ovals, the smaller end being decidedly more pointed.

The food of the Dipper consists largely of insects and their larvæ; many of which, such as caddis-worms, the voracious larvæ of dragon-flies and water-beetles, it seeks at the bottom of the water; thus proving itself the greatest friend of the pisciculturist, by devouring the insects which prey upon fish-spawn and young fry; it also eats spiders, small mollusca, worms, and seeds of grasses. In pursuit of its subaqueous prey it is said both to paddle and use its wings.

Of course the ignorant fish-preserver, seeing the Dippers diving under water among his young fry, immediately comes to the conclusion that his watch-dog is a wolf, and shoots it; in like manner, I heard of a Kentish farmer shooting a Red-backed Shrike, because he saw it in one of his cheery-trees; and, when the bird was opened, and the contents of its crop were shown to him, his only remark was—"Ai doant know nothen abeut thát; ur wuz in my churries."

As regards the Dipper as an aviary bird, I have a vague idea that at one time a pair occupied a very pretty rock-and-water aviary at the end of the fish-house in our Zoological Gardens. I distinctly remember Wagtails in that aviary, and I think Dippers also; but it is many years ago, so I may be mistaken. Lord Lilford says:—"I have often attempted to rear young Dippers, but never succeeded; about three months is the longest period I have ever managed to keep them alive."

Mr. Frohawk writes:—"It was not until I visited North Devon, in October, 1895, that I had the pleasure of meeting with this bird in a wild state: during my first ramble along the picturesque banks of the East Lyn; a wildly rushing stream, whose bed is studded with boulders and fragments of rock, over and around which its water pours and rushes in mad haste, I felt sure that I had come upon the home of the Dipper, so kept a sharp look-out for the birds. After walking for about a mile, I caught sight of a bird darting obliquely across the stream, this I instantly recognized as a Dipper. The following day I again visited the spot, and had a capital chance of carefully observing the attitude and actions of the species, by concealing myself upon the bank, close to a small waterfall, which appeared to be a favourite haunt for a pair of these birds.

I had not waited long before a Dipper appeared, upon a projecting rock at the side of the fall, only a few yards from my hiding place: this enabled me to make a sketch of the bird, as it stood upon the rock intently watching the flow of water (I presume for some aquatic insects, or other food) and it struck me how different its appearance was, as it stood on that rock, with the spray splashing over it, from the illustrations and stuffed specimens which I had long been acquainted with. Instead of a dumpy and somewhat clumsy looking bird, reminding one of a huge fat awkward looking Wren, the Dipper is an extremely alert, active bird; the usual attitude assumed by the ten or twelve birds which I saw, was as follows:—the head generally held fairly high, on a well-proportioned neck, and plenty of it; the tail slightly elevated, not at right angles with the body as generally represented, in Wren-like fashion, but carried as with most other birds; the wings generally with the tips held slightly below the tail: altogether the bird had a very trim and brisk appearance.

One of these birds rose and hovered in front of the waterfall, remaining

stationary in the air for fifteen or twenty seconds (reminding one of the hovering power of the Humming-bird hawk-moth poised in front of a flower): suddenly it dashed through the rushing and foaming water, and landed on the opposite rock, without a draggled feather; a good example of the power of this bird!

The flight of the Dipper is swift and straight like that of the Kingfisher. Although I believe it sings during the autumn, I was not fortunate enough to hear its song; nor did I see it pursuing its prey under the water, running freely about upon the bottom and using its wings as oars."

It is extremely fortunate that Mr. Frohawk should have been able to sketch this bird from life in one of its wild haunts, before the commencement of the present work; it being one of the few British species which he had previously not had an opportunity of studying when at liberty.

FAMILY PANURIDÆ.

REPRESENTED in Great Britain by one species only, which has, I think quite incorrectly, been called a Titmouse: in all its actions it resembles the group of Ploceine Finches known to bird-keepers as Wax-bills: it is also very largely a seed-eating species. As Mr. Howard Saunders says:—"In its digestive organs and other points of internal structure, this bird shows no real affinity to the Tits; and some writers have advocated its relationship to the Finches."

Seebohm, whilst he speaks somewhat disparagingly of those who do not believe in the Parine relationship of *Panurus*, quotes the fact of two hens in confinement laying forty-nine eggs between the 30th of May and the 2nd of August, a feat such as one might expect from a bird having *Ploceine* affinities: he also notes the Bunting-like character of its eggs.

Lord Lilford says, of examples of this genus:—"Their actions much resemble those of the true Titmice, from which in many other respects, such as internal structure, nesting habits, colouration of eggs, and voice, they differ very widely." In this he is quite right, with one exception:—"I never yet saw adult Titmice go to sleep in a row all huddled together, as the Bearded Reedlings do, and as the

BEARDED REEDLING

Astrilds are in the habit of doing; it must also be remembered that many Ploceine birds are extremely Tit-like in their habits, that the majority of them are reed birds, feeding (precisely in the same way as the Reed-Pheasant) on seeds of reeds and grasses, and small insects."

Stevenson, in his "Birds of Norfolk," says:—"I cannot help feeling,—that Macgillivray, guided by an examination of its digestive organs, was right in considering it more allied to the Fringilline than the Parine group."

Even the fact that this species eats small fresh-water mollusca does not, in any way, militate against its relationship to the Finches, many of which (and especially Ploceine Finches) eat worms with avidity, and would, in a wild state, probably devour small mollusca if they chanced to meet with them: indeed it is probable that the lime required by these little birds when laying is chiefly obtained from the shells of small land-, or fresh-water mollusca.

Family—PANURIDÆ.

THE BEARDED REEDLING.

Panurus biarmicus, LINN.

ALTHOUGH in the main I have judged that I could not do better than follow the classification adopted by Mr. Howard Saunders, in his most excellent "Illustrated Manual of British Birds," my conscience is not sufficiently elastic to allow of my calling the present species a Titmouse. I have therefore adopted the alternative name, in preference to the misleading one of "Reed-Pheasant," which is, to my mind, somewhat too suggestive of *Hydrophasianus*:—a bird not strikingly like *Panurus*.

Dr. Gadow states that this bird is distributed "all over Europe (except in Sweden, Norway, and Northern Russia), extending into Turkestan." Seebohm

says that "it has not been recorded south of the Mediterranean or north of Pomerania." "Finsch obtained it in the swamps of the Kara Irtish, south of Lake Zaisan, on the borders of Chinese Tartary; and Prjevalsky found it in North-eastern Thibet."

In Great Britain, the Bearded Reedling has of late years become very rare, owing chiefly to the draining of fens and marshes; but also to the greed of dealers, who have stimulated the marsh-men to incessant search after its nest and eggs. Though formerly its range doubtless extended further northward, it is now chiefly confined to the south-eastern and southern counties of England.

The male Bearded Reedling differs from its hen much as some of the Grass-finches do, in the different colouring of the head and absence of distinct markings on the face: the description given by Mr. Saunders is so clear and concise that I cannot do better than quote it:—

"The adult male has the crown bluish-grey; a black loral patch descends diagonally from below the eye and terminates in a pointed moustache; nape, back and rump orange-tawny; wings longitudinally striped with buffish-white, black, and rufous; quills brown with white outer margins; tail mostly rufous; chin and throat greyish-white, turning into greyish-pink on the breast; flanks orange-tawny; under tail-coverts jet-black; beak yellow; legs and feet black. Length 6·5 in.; wing 2·25 in. The female has the head brownish-fawn, and no black on the moustache or under tail-coverts; in other respects she is merely duller than the male. The young are like the female, but the crown of the head and the middle of the back are streaked with black."

This species is a bird of the broads, fens, and marshes; and, to my mind, is a representative in Europe of the large family *Ploceidæ* or Weaving-Finches; at the same time it does not, as might be expected, belong to that family; but should perhaps be regarded as a link between the latter and the Buntings; its habits resembling the former, and its nidification the latter group of birds.

The nest, which I have found once in Kent, and twice on the Ormesby broads, is placed close to the water, upon a mass of half-decayed leaf and broken reed-stalk, amongst the growing reed-stems; it is an open cup-shaped structure, and has a coarse appearance for the nest of so small a bird, the outside walls being formed of loosely interlaced dead leaves of sedges, reeds, and broad-grasses: the lining consisting entirely of the feathery top of the reed.

The Kentish nest, placed upon a small floating island of reeds, in a large pond at Kemsley (where "Reed-Pheasants" were formerly common) was perfect; but probably abandoned, for it contained no eggs: doubtless the young had flown, inasmuch as it was late in May; and, according to Mr. Stevenson, the full clutch

of eggs is frequently deposited by the 7th or 8th April. The Norfolk nests had an unfinished appearance, and also contained no eggs, possibly they may have been plundered by the "lookers," or by marsh-men. I could hardly have been too early (as I formerly supposed) to find eggs of this species, for again it was in May.

The Bearded Reedling lays from four to seven eggs of a sordid or brownish-white colour, with a few dots, dashes, and thread-like lines of dark-brown: they are distinctly Bunting-like in character: as is the deep nest in which they are deposited.

This species is extremely hardy; and, like the tiny Waxbills of India, is capable of withstanding the severest cold of our winters; as Stevenson observes:—"Delicate as these little creatures appear, I have found them during the sharpest frosts, when the snipe had left the half-frozen waters for upland springs and drains, still busy amongst the reed-stems as lively and musical as ever." It is therefore not surprising that it is a resident species.

According to Seebohm the song "is said to be only a few simple notes, something like those of the Blue Tit. The call-note appeared to be a musical *ping, ping*, something like the twang of a banjo. The alarm-note is said to be a *chir-r-rr*, something like the scold of a Whitethroat. The cry of distress is described as a plaintive *ce-ar, ce-ar*."

As cage-birds Bearded Reedlings are altogether charming; and, of late years, the admirers of the so-called "Reed-Pheasant" or "Bearded Tit," have greatly increased in numbers. Lord Lilford says:—"The chief food of this species appears to be the seed of reed, but in captivity I have found them most omnivorous, and ants' eggs were very favourite morsels with them, as they are with almost every cage-bird with which I have any acquaintance. My living specimens of this species were purchased in London, and were said to have been sent thither from the Netherlands; they became very tame, and are very engaging pets, in motion the whole day long, often hanging head downwards from the top of their cage, and crowding together closely at dusk on the same perch."

Formerly this species was rarely if ever exhibited, but now it is present at most of our bird-shows, examples probably imported from Holland being even admitted to the British classes: this, I think, is as it should be, for, to the aviculturist who studies the birds of Great Britain, it matters not at all whether his specimens were caught on this side of the water or the other, provided that they are identical in plumage.

FAMILY PARIDÆ.

THE Titmice constitute one of the most charming groups among our familiar wild birds; they are incessantly in motion, throwing themselves into every conceivable position; as easily hanging upside down by one foot as many other active birds by both: on a branch they move in a jerky irregular fashion; and, on the wing, their flight is very undulating and not long sustained.

The strength both of bill and claw in these birds is surprising, as anyone who has reared them from the nest can testify: they cling to one's fingers like stiff springs, and if they hammer one's nails with their short stout bills, one blow is enough: no wonder that, when one of a community is taken ill, his companions find it an easy matter to break open his skull and devour his brains; for it is not only the Great Tit which does this.

The songs of the Titmice are scarcely musical, though somewhat varied; for they do not consist, as has been stated, of mere repetitions of the call-notes; indeed the songs of the Great Tit, for he has at least two, do not include his call-note at all, though one of them does introduce an approach to his alarm-note.

The nests of the Tits, excepting when built in holes (as they frequently are) are domed or cave-like structures, with a small entrance in front. The eggs are stated to vary in number from five to twelve, but I know of no Tit which lays a complete clutch of less than six, or more than ten; although as many as twenty may be found in the same nest, if two hens are concerned in the laying. Nevertheless I would not dogmatically assert, in opposition to the direct statements of good observers, that twelve eggs might not occasionally be deposited by one bird; but I should be inclined to believe rather that a first hen, after commencing to lay, had either died or been killed, and her place supplied by a second at once: there would be nothing at all improbable in this.

LONG TAILED TITMOUSE

Family—PARIDÆ.

THE LONG-TAILED TIT.

Acredula caudata, LINN.

THE British representative of this species, to which the name of *Acredula rosea* has been given, can hardly be maintained as a distinct species; inasmuch as, in Western Germany and France, if not also in Italy and Turkey, it freely interbreeds with the typical form; as, in Lombardy it appears to do with another variety—*A. irbii*, between which and *A. rosea* all kinds of intergrades exist. Moreover the differences between these forms are slight and not invariably constant; and the fact that three or four examples of the typical form have been obtained at various times, or seen in company with the British variety would tend to show that the modifications are not even strictly climatic. The different types are as follows:—

A. caudata:—Head, nape and sides of neck, throat, breast, edge of wing and under wing coverts snow-white.

Distributed through Northern and Central Europe, across Southern Siberia to Japan: has occurred in Great Britain.

A. macrura:—Differing in having a longer tail by about half an inch in the majority of specimens.

Northern Europe, eastwards from St. Petersburg and in the island of Askold.

A. trivirgata:—Slighty smaller than *A. rosea*, most examples having the black eyebrow-streak continued across the lores to the base of the bill.

Yokohama.

A. irbii:—Also slightly smaller than *A. rosea*, with the mantle, back, and rump greyer, and the scapulars grey.

Sicily, South and Central Italy and Spain.

A. rosea:—The white on the head restricted to the crown and forehead.

Holland, Western Germany, France, Northern Italy and Turkey. Pretty generally distributed, though somewhat local, throughout Great Britain.

In the female of the British type, the black stripe from eye to nape is broader than in the male.

Although, in body, this is the smallest of the British Titmice, it certainly is

by far the most charming; and its nest, in beauty, excels that of any other feathered inhabitant of our islands, not even excepting that of the Chaffinch.

The favourite haunts of this bird are groves, especially where box and hawthorn abound, the outskirts of woods and plantations, orchards and shrubberies; it is always on the move; and, not being especially nervous, can be easily watched whilst actively seeking its food among the branches, or capturing winged prey in the air; the only requisite is that the observer remain still.

The nest, which varies much in form, is frequently placed in a tall hawthorn hedge, sometimes on the outside in full view of every wayfarer, sometimes in a clipped hedge in the very centre of the forked and thorny outgrowth of one of the middle branches; in an evergreen shrub, such as a laurustinus; in a holly- or furze-bush, in brambles overgrown with honeysuckle or other vines, in ivy, or in the branches of a lichen-covered tree. In form it is either oval, which has given the popular name of "Bottle-Tit" to its architect; irregularly oblong, from which the birds' local name of "Barrel-Tit" is probably derived, or almost perfectly spherical: in size it varies to an extraordinary degree, one of my nests measuring $6\frac{1}{2}$ inches in depth, by $4\frac{1}{8}$ inches in diameter at the widest part; another is $4\frac{3}{8}$ inches in depth, and $3\frac{5}{8}$ inches in diameter; and a third is $4\frac{5}{8}$ inches in depth, and $3\frac{1}{8}$ inches in diameter; the entrance to the nest is always in front, though not always accurately centred; it is always above the middle, and frequently near the top of the structure. The materials hardly vary at all, consisting of green moss felted with wool and cobweb and studded with white lichen; one of my nests also shows fragments of reddish bark; the lining consists of a mass of feathers and hair.*

The eggs are pure white, usually finely but somewhat sparely speckled with rusty or pale blood-red; but occasionally only faintly suffused with this colour: in form they vary from a very obtusely pointed long oval, to a short oval almost approaching a sphere.

My experience of the eggs of this species is, that ten represent a full clutch; but Lord Lilford says that he has found as many as eleven, and that seven is the usual number: as many as twenty have been found in a nest, but there can hardly be a question that, in this case, they are the product of two hens. In Northamptonshire the country people call this Tit "Pudding-bag" and "Pudding-poke," as well as "Bottle-Tit."

Unlike the nests of most of our birds, the home of the Long-tailed Tit takes both parents fully a fortnight to complete; but, when finished, it certainly is "a thing of beauty"! When I have seen one of these lovely works of art torn to fragments and lying on the footpath, I have felt that no punishment could be

* The local name of "Feather-poke" may be due to this.

GREAT TIT

too great to inflict upon the besotted clodhopper who had committed that piece of vandalism.*

The Long-tailed Tit has no regular song, but it constantly repeats its shrill call-note—*tsee-tsee-tsee*; and Seebohm speaks of another note (which I have not heard) and renders it—"a sort of *ptge*, impossible to express on paper."

As a cage-bird this beautiful Tit is extremely difficult to keep; a friend of mine, who has, on several occasions, attempted to domesticate it, tells me that, although he did not find it shy or specially wild, he could never manage to keep it alive for more than two or three days.† Probably, if hand-reared, this charming little bird might be made a pet of: had I ever been able to find a nest containing young, I should certainly have attempted to bring them up. Perhaps I should have failed, and thus unnecessarily deprived the parents of their very attractive family: in the case of many birds, this would be a matter of little moment; but a family of Bottle-Tits is more than usually united, living in unison throughout the autumn and winter; and only separating, for breeding purposes, in the following spring.

Family—PARIDÆ.

THE GREAT TIT.

Parus major, LINN.

SEEBOHM observes that "The Great Tit appears to be found throughout the Palæarctic region, from the British Islands to the Pacific. In Norway, under the influence of the gulf-stream, it ranges as far north as the arctic circle (lat. 66½°). In West Russia it has not been recorded north of lat. 64°. In

* I found all my nests between Rainham and Newington, in Kent, but I have seen the bird in the autumn on Boxhill, near Dorking.

† Dr. Girtanner succeeded in keeping Long-tailed Tits in confinement as long as two years. They thrive best when caught in winter, and should at first be fed on leaf-lice and other insects.

the valley of the Obb, Finsch and Brehm did not observe it north of lat. 58°. On the Pacific coast, Middendorff did not obtain it further north than lat. 55°. It extends in the west as far south as the Canary Islands, Algeria, Palestine, and Persia, and in the east as far as North Turkestan and the Amoor."

This beautiful bird has the crown of the head to below the eye and backwards to the nape glossy black with a bluish sheen; the mantle and upper back are olivaceous-green, which shades into deep ash-grey on the lower back and upper tail-coverts; tail with the inner webs greyish-black, the outer webs deep ash-grey, excepting the outermost feather which has the web and tip white, the next feather also white-tipped; wing-coverts bluish pearl-grey, the outer ones broadly tipped with white; the primaries smoky-brown, the basal half of the outer webs edged with pearl-grey and the terminal half with white; secondaries greyish-brown, darker towards the shaft and paler towards the margins, the outer webs with broad pale edges, the anterior feathers being edged with pearl-grey, and the posterior ones with white; the cheeks, ear-coverts, and sometimes a small spot on the nape snow-white; a belt encircling the neck, the chin, throat, fore-chest, and an irregular streak down the centre of the breast to the vent blue-black, remainder of body below dull sulphur-yellow; under tail-coverts white, varied with black, the tail-feathers below ash-grey, the outer feathers varied as above with white; bill shining black; feet dark leaden-grey; iris deep brown.

The female is slightly duller than the male, and the stripe below is a little narrower. Young birds are also duller, with the cheeks more yellow in tint.

In general colouring our Great Tit curiously resembles the smaller (N. W. Indian) form of the Persian Bulbul *(Pycnonotus leucotis)*.

The "Ox-eye" Tit, as this bird is often called, is abundantly met with in woods, plantations, shrubberies, orchards and gardens; it may be seen at almost all times of the year in search of food, and I do not doubt that many caterpillars of the common Puss-moth which, from their bizarre aspect, deter most birds from touching them, fall victims to this and the other species of *Parus:* I know that, in confinement, the Great Tit does not hesitate for a moment to seize and tear them to pieces. In the winter all these birds are easily attracted by a suspended beef-bone or lump of suet, and the actions of the birds can then be well studied; for in winter more than at other times, the Tits are confiding and reckless of consequences: on this account they are more easily caught in cage-traps than any other birds.

The call-note of the Great Tit much resembles that of the Chaffinch—*chich, chich, chich,* with a slight metallic *n* sound before the last *ch;* its alarm-note is like the bleating of a kid—a sort of *werry, erre, erre,* sometimes running together into a long vibration (I have heard the note when a cat has been climbing the

tree in which the bird was, and invariably after this Tit has been caught and caged). The song varies a good deal, but the best-known song of this species is its ungreased wheel-barrow note, which may be heard at all seasons—*chee-chi, chee-chi, chee-chi, chee-chi.* The true love song is only heard in the spring—*tsoo-tsoo werry tsoo-tsoo werry, tsee tsee.*

The nest is always placed in some kind of cavity, even if it be but a gap among the sticks below a Rook's nest; but the favourite site is certainly a hole in a fruit-tree sometimes a foot or more below the opening; it may also be found in a mere decayed cavity, in which case the nest is built like that of a Wren; in a flower-pot, letter-box, an old disused pump, hole in a wall, or even in the ground, and often behind detached planking and lattice-work.

In form the nest represents two types, those built in open situations are domed, formed of moss; and, in one which I took, without any lining (although it contained its full complement of eggs); the commoner type of nest is merely a slightly concave disc at the bottom of the hole selected by the birds for their nursery, and consists of a thick foundation of dried grass or moss, with an upper layer of hair, wool, or feathers: occasionally (but chiefly when moss is used) the moss is carried a little distance up the inner walls of the hollow trunk or branch. It is no easy matter for the birds'-nester to secure a perfect specimen of the latter type of nest, inasmuch as one has to raise it to the entrance hole by means of a long twisted wire, without losing any of the eggs, and then draw it slowly through what is often a very small aperture.

According to Seebohm the number of eggs varies from five to eleven; but, from my experience, I should say that a full clutch consisted of six eggs, and that any number above six was the product of a second hen: that two hens do lay in the same nest, was conclusively proved by Mr. J. C. Pool in a letter to the "Feathered World" for May 11th, 1894, where he noted the addition of two eggs on the same day, to a nest built in a letter-box. Curiously enough Mr. Pool insisted that the same hen must have laid both eggs, which is (of course) quite out of the question; moreover the nest contained ten eggs, two of which subsequently disappeared, doubtless broken during a quarrel between the two hens and carried out by the victor. Mr. Pool's conviction that—as he never saw more than one hen, there could hardly have been two, proves nothing: the same bird could not have deposited two eggs on one day.* In colour the eggs are white, spotted with blood-red.

That Great Tits may be bigamists is possible, that they are Bluebeards and

* In the case of double-yoked eggs, I believe a day is missed before laying: a Canary of mine after laying three eggs, missed a day; then laid a double-yoked one, which took seventeen days to hatch, and produced two perfect young ones.

cannibals we know; for if two Ox-eyes are kept together in the same cage, one will sooner or later kill the other, and eat (at least) its brains. Some years since I caught twenty-three Great Tits, nine of which I turned into two large flight cages, but they gradually devoured one another until two were left; subsequently, as I needed one of the cages, I turned the two savages in together, and, next morning, one of them was reduced to the condition of Jezebel after the wild dogs had left her: the uncanny consumer of its brethren lived through two moults afterwards, but lost all its beauty, becoming extremely pale in plumage, the under-parts a dirty cream-colour.

A Great Tit turned into an aviary with other birds, is about as safe a companion for the latter as a good healthy brown rat would be: charming and useful when free, he is repulsive in captivity on account of his murderous disposition.

The food of this bird when wild consists largely of insects and their larvæ, spiders, seeds and buds, also flesh and fat when procurable.* The absurd statements made by many writers, as to this and the other Tits only destroying buds for the sake of the maggots contained therein, can be disproved by anyone who has turned them into an aviary in which shrubs and creepers are planted: in so limited an area two or three days will suffice to dismantle every shrub and creeper of both buds and leaves, which are wantonly torn off and dropped. Of course, in the open, buds are so many and birds are so few, that comparatively little real mischief is done; and probably no more fruit buds are destroyed than a gardener would purposely prune away in the form of unripe fruit. Birds nevertheless destroy, not buds only, but leaves and green bark, in which no suspicion of a maggot exists, out of simple wanton destructiveness; just as they will snatch feathers from one another and fling them away.

In captivity, this, and all the Titmice, are very fond of nuts, especially Barcelonas and walnuts; next to which, mutton suet is their favourite food; these dainties they will eat almost immediately after their capture; although, for the first day or so, Great Tits spend most of their time in hammering at the wire and woodwork of their prison: pretty as they are, it is wrong to shut them up; their nature is far too wild.

In May, 1886, I tried hand-rearing Ox-eyes: there were four of them, which had formed part of a family hatched in a hollow plum-tree; I found them quarrelsome above all nestlings, clamorous, and voracious; their call for food was *chûr-chûr-chûr-chûr, chûr:* they lived long enough to fly, and were becoming quite

* The young are fed largely on green caterpillars, and I have watched a pair for a considerable time incessantly travelling backwards and forwards from their nest to a plantation of currant and gooseberry bushes, each time bringing a mouthful of the caterpillars of the destructive little looping caterpillar of the V-moth (*Halia vauaria*).

interesting, when suddenly they all died off within two days; having probably swallowed some wadding from their bed, in their greediness after food dropped upon it.

Family—PARIDÆ.

THE COAL-TIT.

Parus ater, LINN.

DR. SHARPE has separated the British race of this species under the name of *P. britannicus* on account of the olive-brown tint of its upper back; but it would appear that the Continental form also occurs in Great Britain, as well as intermediate grades between the grey and brown-backed forms. As a matter of fact these differences, if they were constant, would be trifling as compared with the far more defined local variations of our Yellow-Hammer, the male Kentish bird in breeding plumage differing from that of some parts of Surrey, almost as much as a Saffron-finch does from a Greenfinch.

On the Continent the Coal-Tit is generally distributed and resident throughout Central and Southern Europe, extending northward in summer up to lat. 65°. In Great Britain it is generally distributed, though local in Scotland, and not recorded from the Outer Hebrides, Orkneys, or Shetlands.

The adult male has the head and throat blue-black, with the exception of a white patch on the nape, and a much larger one extending from a little behind the base of the bill below the eye to the neck; back slaty-grey, more or less suffused with olive-brown; rump browner; wings and tail greyish-brown; median and greater wing-coverts with white tips, forming two bars; breast white, somewhat sordid and gradually shading into buff-brownish on the belly and flanks; bill black; feet leaden grey; iris hazel. The female is duller in colour, the white

patches yellower. The young are more olivaceous above, and the white patches are suffused with sulphur-yellow.

Fortunately this extremely charming species is becoming much more common than it formerly was, in our islands; so that it is no unusual occurrence, in the autumn, to see a family sporting about among the trees of our suburban gardens; young Coal-Tits are wonderfully confiding; so much so that, in the autumn of 1895, I was able to stand under an Acacia in my garden, and watch these pretty little birds going through their acrobatic performances, within two or three feet of my head; indeed, one or two of them, growing bolder as I remained quietly observing them, descended to a slender branch within a foot, and peered down and chattered at me in a most knowing manner—"*ick-heee, ick-heee*" is what they seemed to say; but, to me, this appeared to mean "*Who are you?*" Probably the same words, differently accented, represent a language intelligible to birds; for even we can sometimes comprehend its meaning; as, for instance, when a Canary asks for fresh seed, or for some dainty, the pleading tone is distinctly apparent.

The favourite haunts of this species are plantations, copses, thickets, and shrubberies, especially near open common or moorland; no tree or evergreen escapes its minute examination when in search of insect food; though perhaps the conifers form its favourite hunting-grounds. Its principal breeding-grounds are said to be birch, pine, and fir plantations, and alder swamps; but all the nests which I have met with have been either in hollow orchard-trees or behind ivy-grown trellis-work on summer-houses, or garden walls. The site for the nest is usually in a hole in the trunk of a tree, or in a stump in a hedge, but it has been found in a hole in the earth among the roots of a felled tree-trunk, and Lord Lilford states that most of the nests which he has examined were placed underground in the burrows of rabbits, moles, or mice.

The nest consists chiefly of a thick but loose lining to the selected cavity, sometimes covering only the bottom of the hole, sometimes the sides also; and when more or less exposed behind trellis-work, over-arched, with the entrance in front: I have not taken enough nests of this species to be sure of the number of a full clutch of eggs; but, as different authorities mention the numbers 5, 6, 7, 8, and 9, I strongly suspect that the full number is either eight or ten, though rarely the latter: many nests are undoubtedly taken by egg-collectors before the completion of the clutch, and I have taken nine young birds and an addled egg from the same nest.

The materials of the nest consist of moss, wool, or hair, with a thick inner lining of feathers.

The eggs are somewhat elongated ovals, sometimes with the two ends alike,

chalky-white when blown, though semi-transparent and appearing delicate rose-pink when fresh from the nest; the surface is more or less sprinkled with pale-red dots, which occasionally are collected into a mass at the larger end; but, as a rule the eggs of the Coal-Tit are not heavily marked.

The young, as with the other Tits, are principally fed upon small caterpillars and spiders; of which vast quantities are destroyed during the rearing of a family. Little does the fruit-grower imagine, when he slaughters this amiable little bird, what a vast debt of gratitude he owes it, for the countless destructive caterpillars which it has cleared off his trees and bushes. When adult, their food consists of insects, their larvæ, spiders, beech nuts,* seeds and buds: they are also very fond of mutton suet, or the scraps of meat adhering to a well-cleaned beef-bone.

What is the love-song of the Coal-Tit? According to some writers it is a repetition of the call-note; but, whilst lying awake in the early morning, I have heard a Tit sing in the oak-tree in front of my house, which certainly was neither a Great-Tit, nor a Blue-Tit; and its song was—*tee*, *tsoo-tsoo*, *terry*, as nearly as I could make out at the time: I believe this to be the Coal-Tit's love-song, but am not sure. The songs of birds, which were studied critically by the late Mr. Charles A. Witchell, have, until recently, not received half the attention which they deserve.

The call of the young for food certainly bears no relation whatever to the ordinary call-note or to the above song; in June, 1888, I heard of a nest of young Tits in a cemetery in Kent, and visited it with Mr. Frohawk; we caught the mother bird on the nest and then took out nine young birds and a clear egg. I enclosed the entire family in a cage with the mother and gave her some wasp-larvæ to feed them with; but, although Tits are very industrious and painstaking in feeding their young when they have their liberty, I soon saw that it was hopeless to expect anything of the kind in a cage; the mother-bird simply devoured all the maggots herself and trampled her babies underfoot in her frantic efforts to escape: I, therefore, opened the cage-door at an open window and away she flew without another thought as to the fate of her family.

For a week, during which time I was able to attend to my Coal-Tits personally, they throve splendidly; but unhappily I had to return to work and leave them in the care of a young girl who, in those days, used to come in daily and attend to my birds; the consequence was that these charming little things were neglected, being allowed to get dirty; so that gradually they dropped off, one or

* I saw the Coal-Tit busy upon these at St. Mary Cray, about the year 1891 or 1892, when I was out for a country ramble in that direction.

two in a day, until all were gone. I was a good deal grieved to lose these charming little birds; they were so lively and amusing. The moment that the lid of the basket in which I kept them was lifted, all nine sprang on to the edge, and standing in a row, shouted at their loudest—"*Chutcha, chutchurr; Chutcha, chutchurr*," incessantly, until the feeding was over; then in a moment they scattered, hopping in every direction; some were on my arm, some on my shoulder, others on my head—and a nice little job it was to collect and restore them all to their flannel nest in the basket. Sometimes my wife fed them, and if they did not keep in a row, she used to push the rowdy ones back gently before feeding; so that in a day or so they quite understood and stood up exactly like a class of charity children in uniform saying a lesson: it was a very pretty sight and I quite missed the little things when they died. Poor little mites! it would have been far better to have left them in their parents' care; but, I didn't know that at the time.

Family—PARIDÆ.

THE MARSH-TIT.

Parus palustris, LINN.

LOCAL as this resident Titmouse is in the British Isles, it is not uncommonly captured in the autumn by the Bird-catchers; but, unfortunately these men rarely take the trouble to bring them to Aviculturists; but either kill them, or let them go, according to their nature; some of the men who adopt this method of adding to their earnings being really fond of birds and quite intelligent, whilst others are mere savages.

This species is distributed throughout Central, and the greater part of Western Europe, down to the Pyrenees; it is local in Spain, and rare in Southern Italy and Greece. British specimens, on account of the somewhat browner colouring of the upper surface, as compared with those of the Continent, have received the varietal

H. Grönvold

name of *dresseri*. Our Marsh-Tit is less frequently seen than most of our species, though not uncommon in suitable localities, both in England and Wales; but in Scotland and Ireland it is extremely local.

The adult Marsh-Tit has the forehead, crown and nape glossy-black, to a line below the eye from base of upper mandible; back greyish-brown, slightly cupreous in a bright light, paler on the rump and upper tail-coverts; wings and tail smoky-brown, slightly browner along the outer webs of the feathers; chin and throat black; cheeks ashy-white; remainder of under parts ashy, suffused with buffish-brown on the sides, flanks, thighs, and vent; flights and tail below ash-grey; bill black; feet leaden-grey; iris dark-brown. The sexes are very similar; but the young are duller and somewhat browner.

Although often found in the neighbourhood of marshes, this Tit is by no means strictly confined to moist situations; for I have not unfrequently seen it in my own garden at Beckenham, though more frequently in the autumn than at other seasons, and often in company with Blue-Tits: its song is not of much account—*tsiz-tsiz-tsiz*, *chee*, and the call-note a rapidly repeated *chay*, *chay*, *chay*, *chay*;* in spring it is also said to utter a loud double note somewhat resembling the ordinary wheelbarrow note of the Great Tit; but this I have never been able to confirm; though I may have heard the note without recognizing its author: but from what I have seen of this species, both wild and in confinement, I should judge it to be less noisy than other Tits.

In disposition the Marsh-Tit is gentle, confiding and lively: in its actions, flight, method of feeding and the nature of its food, it corresponds closely with its congeners; but I found it a more inveterate bather, which may perhaps account for its preferring the vicinity of water. According to Lord Lilford this bird is less often to be found amongst high trees than our other species.

Although a resident bird, the numbers of our British bred Marsh-Tits are largely increased by autumn immigration, the arrivals again taking their departure early in the succeeding spring.

Stevenson, in his "Birds of Norfolk," gives the following interesting account: "Though commonly met with by rivers and streams and in other low and damp situations, it is also found in our fir plantations and in gardens and orchards far from any water, where, in autumn, they feed on the seeds of various berries, being particularly partial to those of the snowberry shrub *(Symphoria racemosa)*. Before I discovered the actual depredators I had often observed that the berries on these shrubs in my garden disappeared very rapidly, and, moreover, that the berries themselves were strewed about under the neighbouring trees. I was quite at a

* In Yarrell, it is rendered *peh*, *peh*; but it is *chay* or *tsay* in my opinion.

loss to account for this, until one morning I observed a Marsh Titmouse flying across the grass-plot with a white ball, almost as big as his head, on the point of his bill. He looked so oddly at the moment I could scarcely at first sight determine either the bird or its burthen, but as soon as he alighted on an opposite tree he gave a little wrench with his beak, and dropping the husk at the time, flew off direct to the snowberry bush. The whole thing was now explained, and as I watched, another Titmouse joined the first, and these continued as long as I had time to wait, carrying off the berries on the ends of their bills to the same tree opposite, where they opened and dropped the husks, then back again for more. On picking up these husks afterwards, I found each of them split open down the side, and minus the two little kidney-shaped seeds that grow in either half of the white fruit." As my son has one or two of these shrubs in his garden next door to me, it is possible that they may account for the presence of Marsh-Tits in my garden.

The Marsh-Tit usually nests in holes in trees and near to the ground, after the manner of the Coal-Tit, and, like some of our other species, it has been known to make a hole for itself in a decayed tree; it has also been known to build like a Tree-Creeper behind loosened bark, and nests have been found in mouse or rat-burrows in banks.

Lord Lilford observes that "Both nest and eggs may easily be mistaken for those of the more common Coal-Tit, but the present species sometimes makes use of willow-down as a lining, and, so far as I know, never employs feathers for that purpose. The eggs are from five to seven or eight in number."

Seebohm says:—"Occasionally it breeds in a pollard willow, and has even been known to build in a rabbit-burrow or an old rat's hole. The inside of the hole, if too deep, is filled up with bits of wood or small twigs and upon this foundation a moderately neat nest is composed of moss, wool, hair, and any other soft material that may be within reach. Fresh eggs may be found in May; and it is said that a second brood is often reared. The number varies from five to eight, and some writers say even twelve; but no such case has ever come under my notice. They are white with a scarcely perceptible yellowish tinge in ground-colour, spotted and speckled with light red. The markings are usually most numerous on the large end of the egg."

I have not personally taken this nest; but, if it were more abundant, I should expect to find that the number of eggs in a full clutch would vary from eight to ten, the former being the usual number.

About August, 1890, a bird-catcher brought me a pair of Marsh-Tits which he had caught at Beckenham in his nets. I turned these birds out with a number

of Finches which occupied one of my aviaries; and, after a day or two, they were quite at home. Unfortunately that particular aviary was then arranged for picturesque effect, with rockery, a shelving shingly bank and a rather deep stream some fourteen feet in length. Such attempts to imitate nature are a mistake, unless the rockery can be made of smooth slabs of solid stone easily cleaned, and even then they are liable to harbour mice. The result as regards my Marsh-Tits was, that the hen bird when washing, one cold day in January, 1891, either got out of her depth or was seized with cramp, and I found her floating dead on the surface of the water: she was not the first victim, but her death decided me to abandon artistic effect in aviaries.

The male bird lived some months longer, and made a perfectly innocent and very pretty addition to my feathered family; he fed principally upon seeds, nuts, and suet; but was always ready for spiders, as well as insects and their larvæ when they were procurable, and he ate a certain quantity, though not a great deal of the usual soft food; he was never spiteful; but, if a beef-bone was suspended in the aviary he would join a party of Siskins upon it in perfect amity: indeed, unlike the Blue-Tit, he seemed unwilling to dispute over trifles, and if a Siskin took a fancy to the position which he occupied on the bone, the Marsh-Tit immediately yielded it up.

As regards longevity in captivity I cannot recommend this, or any of the Tits to aviculturists; possibly they require more insect-food than I was able to give them; but, at any rate, I never succeeded in keeping any of these birds for much over a year; and most of them, when opened after death, were clearly proved to have died from phthisis, their lungs being studded with miliary nodules.

Family—PARIDÆ.

THE BLUE-TIT.

Parus cæruleus, LINN.

"DISTRIBUTED over the whole of temperate and Southern Europe, as far east as the Ural Mountains and the Caucasus. In Norway, owing to the comparative mildness of the climate, it is found as far north as lat. 64°; but in Russia it has not yet been obtained further north than lat. 61°." —*Seebohm.*

Pretty generally distributed in Great Britain, but rare and local in the north-west of Scotland, not recorded from the Hebrides, and in the Orkneys and Shetlands only a chance visitor.

The Blue-Tit is one of the most beautiful of our small birds; it has the crown of the head smalt-blue, completely encircled by a white stripe, commencing on the forehead, passing over each eye, and into a bracket-shaped line across the back of the head; behind the latter, at back of head, is a belt of indigo which widens at the sides of the neck and divides, its upper ramus passing through the eye to the base of the bill and the lower forming a belt round the sides of the neck, and uniting with a triangular black patch which occupies the throat and chin; cheeks and ear-coverts white; nape bluish-ash, whitish in the centre, remainder of body above yellowish-green; wings and tail blue, the greater wing-coverts tipped with white; breast and abdomen sulphur-yellow, with a more or less defined central longitudinal black stripe; flights and tail feathers below ash-grey; bill smoky, paler at junction of mandibular edges; feet deep bluish-leaden, inclining to black; iris dark brown. The female is altogether somewhat duller than the male, the cheeks slightly ashy and the under parts suffused with olive-greenish. The young are still duller, the blue being less pronounced, and the plumage generally more yellow.

Most observant people are familiar with the Blue-Tit, or Tom-Tit as it is frequently called; yet I have had it described to me as "a foreign bird, evidently escaped from some aviary," which shows that even in this enlightened age, there are individuals whose eyes are closed to the beauties which abound on every side

BLUE TIT

of them. In its habits this species does not greatly differ from its congeners: wherever trees are it may be seen in more or less abundance, whether in forest, plantation, orchard, shrubbery, garden, or hedgerow, and everywhere its various calls may be heard as it searches the twigs and branches for food or amuses itself in stripping off buds and leaves. Suddenly one of these mites leaves a tree and with undulating flight crosses the open to some new field of operations, and immediately all the Tits in that tree are after him in a wavering stream anxious to see what he is about.

The love-song of the Blue-Tit is not at all like its call-notes: I carefully took it down, and went over it note by note, as a bird in the next garden repeated it: this song was—*Tee-tit-tit-twee, tee-te-twee, tee-te-twee;* I have also heard it sing—*Wee, wee, wee, tit-tit-titta:** the call-note, however, is *tsee, tsee, tsee*, and the call of the young *chee-zek*, or sometimes *te-uzza, chee-zek;* the scolding-note is a sort of diminutive chatter, Seebohm calls it "a harsh chattering note," which I think describes it very aptly.

In its food this bird is almost omnivorous: insects of all kinds (no matter how large) and caterpillars, spiders, centipedes, fat, the brains of its sickly relatives, fruit, nuts, seeds, bread, potato: all are eaten with relish. In winter, if a bone, with a few fragments of meat adhering, is hung up, the Blue-Tit is not the most backward of its family in taking advantage of it: it feeds its young on caterpillars, chiefly of the V-moth *(Halia vauaria)*.†

The nest is placed in all kinds of situations: in holes in trees, walls, banks, gravel-pits or gate-posts, in lamp-posts, old pumps, in niches in out-houses, on tops of walls under overhanging thatches, and behind lattice-work of summer-houses: but, whatever the cavity selected, it is thickly lined at the bottom, often at the side, and (when exposed behind lattice-work) over-arched, with moss, dead leaves, dried grass, feathers, and cobweb: the nest thus formed is entered either from the top or front according to its method of construction; a thick bed of feathers forms the inner lining. The eggs, according to my experience, vary in number from eight to ten for a full clutch, eight being the usual complement; but some writers have asserted positively that they have found twelve and even as many as eighteen in a nest; in all such cases I should strongly suspect that two hen birds had deposited in the same nest: ten is not a common number for I have only once found a Blue-Tit on so many eggs; on one other occasion I took ten young ones

* One of the commonest songs of the Blue-Tit consists of two or three shrill notes, followed by a descending trill.

† This being a Gooseberry-moth, the blunder has been made of crediting the Blue-Tit with eating caterpillars of "the Gooseberry moth *(Abraxas grossulariata)*": I know of no British bird which will touch this caterpillar.

out of a nest out of curiosity, and then replaced them. I should, therefore, regard a Blue-Tit which laid twelve eggs as a phenomenon of fecundity, and one reported as laying eighteen as a myth.

In colouring the eggs are snow-white, with the usual pink transparent glow when freshly deposited: in spotting they differ not a little; some eggs at first sight appearing to be immaculate, but when closely examined revealing numerous dust-like specks of light red and dark grey, principally confined to the larger end; a second variety is pretty evenly sprinkled all over with rust-red dots; a third form shows larger spots scattered amongst the smaller markings; a fourth differs from the latter in the presence of splashes of red at the larger end; finally I have taken specimens in which grey and red-brown spots are massed into a dark zonal patch at the larger end. Some of the eggs which I have found, excepting that they are perhaps a trifle longer, could not be distinguished from those of the Willow-Warbler; and others, excepting that they are a size smaller, might easily be mistaken for those of the Wren. It is not therefore safe to identify eggs of this species, unless you have taken them yourself; and, on no account should the statements of peasants be credited for a moment; since they almost invariably confound the Blue-Tit and the Wren.

There is never any difficulty in identifying the eggs of Tits which one takes, because the mother bird is usually in the nest and never far away: many a time in spite of her hissing and pecking I have lifted her off her eggs and held her in one hand whilst I examined the collection to see whether it was in condition for preservation or too far incubated: if the latter, I had only to open my hand to see her at once return to her duty.

I know of no other bird which sits so closely as the Blue-Tit: in my "Handbook of British Oology," I have recorded the fact that on the 27th June, 1881, I found the nest of this species in a cavity left by the removal of a brick in an outhouse, where the gardener of the place kept his tools. The nest, when I discovered it, contained four eggs only; perhaps it was the last effort for the season, for no more were laid. Each day I took one egg, but substituted a marble for the last one, on which the Tit was contented to sit; after three or four days I removed the marble, and, a day or two later, the nest: what then was my astonishment, about two days afterwards, to find the stupid bird still squatting in the hole in the wall; she had the sitting fever on her and meant to sit it out!

In June, 1889, a nest of ten young Blue-Tits was sent to me, one of which unhappily came to hand with a broken leg: instead of nipping off the swinging tarsus with a sharp pair of scissors (as I ought to have done) I bound up the limb with worsted, the poor little mite looking up in my face all the time, and

repeatedly saying in a most piteous voice, or so it seemed to me at the time—"Ye mustn't forget." The leg united and formed a stiff joint, but unfortunately the claws got in the bird's way when it attempted to fly, so that at last its chief pleasures consisted of eating and bathing, and one morning I found it sitting up dead in its bath; possibly cramp may have attacked its one useful leg and kept it in the cold water until the chill had killed it. Of the remainder two died the day after I received them, one a month later, and a fifth was still delicate at the end of July; the five others by this time were quite independent, were as tame as white mice and infinitely more amusing (indeed for several months they formed the principal attraction to my visitors) they used all to come down upon me the moment I entered the aviary, evidently regarding me as a museum of curiosities especially designed for their delectation. They would all sit together feeding out of the palm of my hand; only, every now and then, they would hop on to one of my fingers and begin to hammer at the quick of the nail, which compelled me to interfere; then all five would fly up to the rim of my wideawake and hop round, trying to pull the ribbon to pieces; next I should feel one drop to my shoulder, when it would hop to the collar of my coat and pull my ear, or my hair. Another favourite occupation was, to start from the bottom of my waistcoat and carefully examine and test every button, pull at my watchchain, peck at the outer rim of each pocket, then back to my hand, whence they would travel by little zigzag hops along my arm to my shoulder.

Seeing how tame these hand-reared Tits were, I caught twenty others, which I turned in with them; and, although these also became tame enough to feed from my hand, they never acquired the confidence of my nestlings. Alas! charming as these birds were, they were short-lived: I had provided numerous warmly furnished boxes for them to retire to at night, but they would not behave in an aviary as they do out of doors, each claimed its own box and fought all would-be intruders; so that, as the nights grew colder, they were quite unable to keep warm, and dropped off one at a time: moreover, no sooner did one of them become ill and lie in bed in the morning, than callers began to drop in to breakfast (not with the invalid, but) upon its brains: this I proved repeatedly. Out of doors the whole family would have crept into one hole, or into the warmer side of a haystack, and all would probably have survived; but good living made them selfish and high-minded, and disaster followed. On the 15th December only one remained alive, and a severe frost, lasting for twenty-two days, in the early part of 1890, killed him: I have given up keeping Blue-Tits since that time.

Family—PARIDÆ.

THE CRESTED TIT.

Parus cristatus, LINN.

NEVER having personally met with this extremely local species, I am compelled to base my account of it entirely upon the writings of others; a course which, when possible, it is always best to avoid.

As regards its distribution on the Continent, Howard Saunders writes:—"The Crested Titmouse inhabits the pine-forests of Scandinavia and Russia to about 64° N. lat.; and eastward it can be traced as far as the valleys of the Don and the Volga. In Germany, wherever conifers are plentiful, and in the higher districts of France, the bird is to be found in tolerable abundance; it also breeds in Dutch Brabant, principally in oak-trees, for it is by no means restricted to firs; and in the Alps, Carpathians, and other ranges of Central Europe it is generally distributed. In some parts of the Higher Pyrenees I found it the most abundant of the genus; while in the south of France and in Spain it may often be observed among trees close by the sea. In the latter country it breeds in the cork-woods in the vicinity of Gibraltar, as well as on higher ground; and it is also common in Portugal."

Respecting its distribution in Great Britain, Seebohm says:—"Its only known breeding-grounds in the British Islands are in Scotland, in the valley of the Spey and in the adjoining counties of Ross and Inverness on the west, and Aberdeen on the east. In winter its distribution is a little more extended, and Mr. Gray remarks that it has been obtained as far south as Perthshire. In the western counties of Scotland but two specimens have been obtained—one in 1838, near Barcaldine House, in Argyleshire, and another, of which the exact date is not known, taken near Dumbarton."

"In England, Mr. Harting, in his 'Handbook,' records eight instances of its occurrence; Mr. Simpson records another in the 'Zoologist,' for 1872, p. 3021, and Baron Von Hügel one more specimen in the same periodical for 1874, p. 4065."

As to the reputed occurrence of two specimens of the Crested Tit in Ireland, authorities are not agreed; therefore it is safest to doubt.

The male Crested Tit, when adult, has the feathers of the head black, margined with ashy-white; those from the crown backwards elongated so as to form a well-

defined crest; from the nape backwards the upper parts are olivaceous-brown, the flights and tail being smoky-brown; face white, mottled with black; a black stripe from the base of the bill, through the eye to the back of the head and thence descending, so as to bound the ear-coverts and cheeks; behind this is a white band again bounded by a black stripe which crosses over the back of the head, round the neck and unites with a black gorget which occupies the centre of the chin, throat, and breast; remainder of under parts sordid-white, suffused at the sides with brownish-buff; bill black; feet leaden-grey; iris brown.

The female differs from the male in its shorter crest and more restricted throat-patch: the young are similar, but with still shorter crest.

The Crested Tit breeds throughout the pine-forests of Europe; but it is also said to frequent birch-plantations. Seebohm informs us that "in autumn it partially forsakes the pine-forests, where it breeds, and is seen in winter in many of the small woods and plantations, and even the gardens, in the neighbouring districts; but even in these localities it prefers the pine to any other tree."

It is curious that the Crested Tit should hitherto not have been met with in Morocco; but Dixon, in his "Birds of Algeria," observes:—"The Crested Titmouse, *Parus cristatus*, may yet be found to inhabit the Algerian or Moroccan forests."

The call-note of this bird is said to be a rather weak *si*, *si*, *si*, followed by a sort of trill which has been rendered *ptur*, *re*, *re*, *re*, *ree:* the call-note of many of the Tits has been similarly rendered *si*, *si*, *si;* but when carefully analyzed it resolves itself into *tsay*, or *chee*, or *tsee:* in any case it is probable that the combination of *si*, *si*, *si*, with a terminal trill represents the song, and a single sharp *si* or *tsee* the call-note (of course this opinion is only based upon observation of other species, and may be incorrect).

In the south-west of France the nest is stated to be usually placed behind the loosened bark of pine-trees; in Germany in deserted nests of Crows, Magpies, or Squirrels; and in Scotland, in holes bored into rotten fir-stumps, at altitudes of from two to eight feet above the ground; sometimes it is said to lay its eggs in deserted Wren's nests, but as it has also been stated that it sometimes builds a nest of this character itself (which a study of the other species of *Parus* would lead one to believe highly probable) the observation respecting its occupation of Wren's nests may be erroneous, and should only be accepted after full confirmation. At the same time, it is likely enough, if its own nest were destroyed just when it was laying, that it would utilize such a structure; inasmuch as I have even found eggs of the Blue-Tit, upon which the mother bird was sitting, in a Sand-Martin's nest.*

* I took this nest for my collection; and, as it contained only three slightly incubated eggs, it is certain that the first part of the clutch had been previously deposited elsewhere.

The nest itself is formed of the usual materials—moss, dry grass, wool, feathers, and fur; constructed generally about the end of April, or beginning of May. The eggs are said to number from four to eight, the full clutch probably would be from six to eight, if one may judge from its congeners. In colouring they seem to vary much as in the other species; they are white, spotted and speckled with brownish or sienna-red, sometimes all over, sometimes in blotches, or with a zone towards the larger end, occasionally with an irregular patch at that end.

It is very probable that, in Germany, this species may be kept in aviaries, but in England I have only seen it at bird-shows; Swaysland, however, speaks of it as "a very desirable addition to an aviary of Tits," therefore he may possibly have been more fortunate.

FAMILY SITTIDÆ.

THIS group is represented in Great Britian by only one species, which Seebohm regarded merely as an aberrant genus of Tits; but he stated rightly, that "In their habits they resemble the Woodpeckers and the Creepers more than the true Tits." Nevertheless in their activity and many of their actions Nuthatches are very Tit-like; so also, in the strength of their bills and feet, the position and covering of the nostrils, their short first primary, scutellated tarsi and hooked hind-claw, they show *Parinæ* affinities, whilst their eggs are extremely Tit-like in character.

Our Nuthatch, though it approaches the Titmice, could never be confounded with them; it has more nearly the aspect of a dull washed-out *Liothrix*, yet with a little longer bill: it seems therefore far better to follow Howard Saunders, and regard it as the representation of a distinct, though allied, family. In one respect it differs very widely from the Tits in habits, and that is in its use of clay to lessen the size of a hole containing its nest, and the very meagre character of the nest itself.

In Vol. VIII of the "Catalogue of Birds in the British Museum," Dr. Gadow regards the Nuthatches as a Subfamily of the Creepers *(Certhiidæ)*, practically ignoring the affinity of the former to the Titmice; but, apart from the total

NUTHATCH [illegible]

PLATE 41

dissimilarity in the bills of the Creepers and Nuthatches, the latter are decidedly less insectivorous, and their manner of sitting across a branch to crack a nut, is infinitely more suggestive of a Tit than a Creeper; whilst their softer shorter tails, stouter legs, and the character of their nostrils, serve at once to distinguish them from the *Certhiidæ*.

As a student of Bird-life, rather than of Bird-mummies, the convenience of a distinct family for the Nuthatch commends itself to the writer.

Family—SITTIDÆ.

THE NUTHATCH.

Sitta cæsia, WOLF.

THE British race is found on the Continent northward as far as Jutland; it is generally distributed from the Baltic southwards to the Mediterranean and Black Seas, and is said to occur in Algeria and Morocco; eastwards its range is uncertain.

In England it is pretty generally distributed, being common in well-wooded districts of the southern and central counties, but in the northern counties it is much rarer and more local; in Scotland it has occurred three or four times, but in Ireland it appears to be unknown.

The male Nuthatch, when adult, has the upper parts slate-grey, the flights smoky-brown, with greyer margins; two central tail-feathers slate-grey, remaining feathers with the basal three-fourths black, then crossed by a white bar, beyond which they are grey: a black stripe from base of upper mandible, through the eye, to the side of the neck separating the grey of the crown and nape from the buffish-white cheeks, ear-coverts, chin, and front of throat; remainder of under surface buff, streaked and shaded with deep chestnut on the flanks and sides of

under tail-coverts, the centre of the latter being whitish; bill leaden-grey, the lower mandible paler, but especially at the base; feet brown; iris hazel.

The female is a little duller than the male, the chestnut on the flanks being less pronounced; the young are still duller, and paler on the flanks.

Restless, indefatigable, quick in its actions, the Nuthatch may be seen running upwards or downwards like a mouse over the rugged trunks of lofty trees, frequently travelling in jerky zigzag fashion, searching in every crack and cranny for insect food; yet, unlike orthodox good children, the Nuthatch is much more frequently heard than seen, for it is of a very modest and retiring disposition.

Stevenson observes respecting this species:—"much amusement has been afforded me, after discovering their haunts, by placing nuts, or their kernels only, in such situations as would enable me to watch the actions of these birds. In confinement the young become very tame, and from their activity and quaintness in every movement are most engaging pets, but sadly destructive to any woodwork within their reach. If constantly supplied with fresh bark, they never tire of searching each corner and crevice for insect food, clinging to it in every imaginable attitude with their strong claws whilst beating all the while with their beaks a very 'devil's tattoo,' unpleasantly suggestive, in its persistent monotony, of the busiest moments of a coffin-maker."

The Nuthatch is one of our early breeders, usually commencing to build about the middle of April; the site chosen is most frequently a hole in a tree, generally in a branch, but sometimes close to the ground; a hole in a wall is not infrequently chosen, and rarely in the side of a haystack; the single recorded nest of this type in the British Museum having been mentioned by almost every writer on British Birds, on account apparently of its weight: the entrance to the hole, in which the apology for a nest is placed, being always filled up with clay until only a small aperture is left for the passage of the birds in and out. Lord Lilford speaks of their using also old mortar or cement, which they must somehow have managed to moisten and render serviceable; possibly they mixed it with wet clay.

The nest itself consists merely of a few leaves, often of oak; a few scales of fir-bark; or a little dry grass; at some distance from the entrance to the hole. The eggs, which vary in number from five to eight, very closely resemble those of the Great Tit, but are larger and frequently with deeper red-brown spots, bolder in character and intermixed with lavender or greyish shell-spots: the different forms of the egg are just what one finds among the Tits, the spots larger or smaller, evenly distributed, massed in a zone near the larger end, or forming an irregular patch at that end.

The song of the Nuthatch consists of a prolonged soft whistle, followed by a

bubbling twitter; but its call-note is a shrill *whit-whit*. The food in summer principally consists of insects, in search of which it sometimes comes in contact with various Tits or even the Lesser Spotted Woodpecker, towards which it exhibits its very pugnacious disposition. In the autumn, when insects are becoming scarce, it turns to nuts, beech-mast, seeds of conifers, and berries; and in the winter it will approach houses to feed on refuse scraps.

As a cage-bird the Nuthatch is constantly increasing in popularity; as the numbers now exhibited at our shows testify. When reared from the nest it becomes just as tame and confiding as the species of Tits, running over and examining its owner in the same manner; but even adult birds caught wild, although at first they show impatience of captivity after the manner of all the Tit-like birds, do not (as Seebohm asserts) necessarily die on that account: perhaps if kept in a small cage the violent blows which they deal in their frantic rage at close confinement after liberty, may injure the front of the skull and thus produce death; but this is also the case with the Great Tit when similarly treated. The best plan with all these birds when first captured is to give them plenty of room in a box-cage, the back of which should be covered with virgin-cork, behind which (when alarmed) they may retire. For a day or two it is well to cover the front of the cage with muslin, which renders all newly caught birds less liable to attempt escape in that direction; gradually accustom them to your presence, always offering them delicacies until they learn to trust you: for as Lord Lilford says:—"The kernel of a hazel or ground-nut is an irresistible morsel, and will tempt an old wild-caught Nuthatch to snatch it from the fingers very soon after capture."

FAMILY TROGLODYTIDÆ.

THE Wrens are represented in Great Britain by one species only; the St. Kilda Wren, to which Mr. Seebohm gave the name of *T. hirtensis*, being now considered a mere local variation, and inseparable from some of those found on the Continent.

Dr. Sharpe regards the Wrens as a mere Subfamily of the *Timeliidæ* (Babbling Thrushes) remarking,* "In their habits and in their form the Wrens are essentially Timeliine. They possess the strong, even clumsy, legs and concave rounded wings which distinguish this group of birds, and they do not migrate, as a rule. The nests are generally domed, and hence one of the reasons for retaining the Dippers in the family. The principal characteristic, however, of a Wren, and one that separates them from the true Timeliine birds, is the almost entire absence of rictal bristles."

Seebohm, on the other hand regards the Wrens as aberrant Tits; so far as I can make out, solely on the ground that their eggs are almost identical: he admits that they are "Timeliine in their habits, skulking in underwood, and without undulation in their flight."

Doubtless the affinities of the Wren are rather Timeliine than Parine; but most students of British Birds are not familiar with Bulbuls, Shamas, and the like; moreover, if they were, they would probably fail to see any resemblance between the long-tailed, stout-billed, conical-crested Persian, or Red-vented Bulbuls,† and our stumpy little cock-tailed Wren, whilst the cave-like nest of the latter, if it be an argument in favour of the affinity of the Dipper to the Wrens, must also argue against the close relationship of the Bulbuls to the latter birds.

The most convenient plan, therefore, seems to be that adopted by Mr. Howard Saunders—to regard the Wrens as a Family rather than a Subfamily.

* "Catalogue of Birds," vol. VI, p. 180.

† The crests of these birds are not ragged, as usually shown in illustrations, but form a regular unbroken line at the back.

Wren

Family—TROGLODYTIDÆ.

THE WREN.

Troglodytes parvulus, KOCH.

OCCURS throughout Europe up to 65° N. lat. in Scandinavia and North Russia, occurring in Morocco and Algeria, also in the Caucasus, Northern Persia, Asia Minor, and Northern Palestine.

In Great Britain it is generally distributed and resident; but, as with many more resident species, its numbers are greatly added to in the autumn by immigration.

The adult male has the upper surface rich rufous brown, the crown and nape appearing slightly darker; thence barred throughout with deeper brown; the primaries brighter, their outer webs barred with pale-buff; a buffish-white streak over the eye; under surface pale-brownish, more rufous and darker on the flanks, belly, and under tail-coverts, which are also barred with smoky-brown; bill dark-brown above, paler below; feet pale-brown; iris dark-brown. The female is slightly smaller, duller in colouring, with paler legs. Young birds are slightly more rufous and less strongly barred.

From its remarkably confiding habits the Wren has become as well-known as the Robin; and, incredible as it may seem, there are still many persons living who believe it to be the female of that familiar bird; their study of Natural History has apparently ceased from the period when they let go of their nurse's apron-string, and the old rhyme—"Cock Robin and Jenny Wren, are God's A'mighty's cock and hen," is regarded by them as inspired truth. Curiously enough, whereas the Robin seems to be everywhere held in superstitious reverence, the poor little Wren is remorselessly hunted to death in Ireland, the Isle of Man, and the south of France, for no better reason.

Although bold and fearless in the winter, the Wren is more frequently heard than seen in the summer months; although, in the spring, I have seen it sitting in a low tree singing merrily enough: the song bears some resemblance to that of the Hedge-Sparrow, but is much more varied, more rapid, and usually terminates in a trill: the call is *tsit-sit-sit*, often repeated over and over again, as the little bird drops from twig to twig in the cover. Excepting when feeding the young,

and when moulting, the Wren's song may always be heard; it is loud and brilliant, rather than melodious.

When breeding, and it is an early breeder, there is no British bird more jealous of its nest: to be seen watching a Wren at work is often sufficient to condemn the half-completed building, a fact which I have proved by actual experiment: this excessive nervousness is probably the sole cause for the many imperfect or deserted nests which occur, and which are supposed by rustics to be purposely constructed as roosting-places for the male birds. But, after all, the same notion has been countenanced, even by scientific men, respecting the incomplete nests formed by unpaired males of the Baya Weaver; whereas, in the latter case, the nest is always completed by the combined labours of both sexes, and apparently cannot be managed by one sex unaided.

Only once was I ever successful in removing eggs from a Wren's nest, without causing desertion; and then I chanced to discover some small oval white pebbles close to the gorse-bush in which the nest was suspended, and substituted them for the eggs; but I was very careful not to touch the nest with my fingers, using a metal spoon to remove the eggs. The hen bird was evidently far away at the time; for, had she seen me, I do not believe she would have continued to lay; as she certainly did.

On the other hand Mr. Reginald Phillipps says that he has known of a nest, which had had a clutch removed, used again, even though the eggs of the second clutch were removed every day as they were laid. If he had said that he himself had taken part in or even witnessed this extraordinary feat, I should have felt bound to regard it as a very remarkable and entirely unparalleled fact; as it is —well, my experience is diametrically opposed to that of his informant. The Blue-Tit, which is one of the most confiding of birds, is often confounded with the Wren, and doubtless many tales told of the latter relate to the former.

I have found nests of the Wren built in the following sites:—in hedges; hawthorn-bushes; furze; laurels; in ivy on walls, or clambering round the entrances to caves or grottoes; against trunks of trees, either openly near the ground or higher up in the trailing ivy; in brambles and straggling scrub in woods, where masses of the previous year's leaves have collected in the vines; under overhanging edges of steep banks; in faggot-, clover-, or hay-stacks; under projecting thatches of sheds and outhouses; upon a beam in a barn: but *never* in holes.

In the materials used for the nest, the Wren appears to select usually such as will tend to conceal it; the fact being that it builds very largely with those which are most handy; thus nests bedded in heaps of dead leaves are externally largely constructed of leaves, those in evergreen shrubs are also usually formed of

dead leaves, those in trailing creepers in which dead leaves have lain until moss has grown on them, are largely formed of the same rank moss; but a nest against the bare trunk of a tree is largely made up out of straws and stiff bents, the ends of which can be forced behind the loosened bark to support the structure. In form the nest is cave-like; domed, spherical, or oblong, with entrance in front, the lower edge of which is always strengthened with transverse twigs or stiff bents, so as to form a sort of perch or door-step: the walls are thick and fairly firm, often formed of dry stalks and dead leaves, commingled with fibre; but, in a barn wholly of straw; sometimes almost entirely of moss, whilst instances have been recorded of nests formed entirely of clover. The inner lining consists, I believe invariably, of a little moss and three or four soft feathers.

As regards the number of eggs in a nest, opinions differ; chiefly, I imagine, owing to the fact that collectors have trusted to rustics to obtain clutches for them, instead of taking them invariably (as they should do) with their own hands: consequently the average peasant who does not, as I have repeatedly proved, know the difference between a Wren and a Blue-Tit, brings clutches of eggs from nests of the latter, asserting that he took them from Wren's nests.

In my experience the Wren never lays more than six for a full clutch, and I dare say that I have either taken, or examined without touching, something like fifty nests; therefore, if more than six are ever deposited, the number must be very abnormal; Seebohm's statement as to the number is probably based largely upon the assertions of others, which have been copied from work to work: his first observation "The eggs of the Wren vary from four to six" representing his personal experience, but the continuation—"and even eight or nine in number" with what follows, are probably not original, but must be traced to the fact that, excepting in their slightly superior size, the eggs of the Wren (in all their varieties) are extremely similar to those of the Blue-Tit. Mr. Frohawk has taken many nests, but he tells me that he has never found more than six eggs.*

On the 31st September, 1887, a specimen of this species, caught in my large Thrush-trap, was placed in a Linnet-cage and immediately escaped through the wires into my greenhouse, where it was so nimble in dodging us, that a full hour elapsed before it could be caught and placed in a large cage. In the evening I found it asleep clinging to the wire netting, and in the morning it was dead. Two or three years later I caught another, and turned it loose in an aviary sixteen feet long, where it seemed perfectly at home at once, behaving quite naturally, showing no alarm whatever, but examining the rockwork (then in the aviary) most

* In 1896, at least two men who should be able to recognize a Wren's nest, wrote to the "Feathered World" asserting that they had taken several clutches of seven eggs, during the past season, in the North; but, even if this were proved, it would not alter the fact that the full clutch is usually *six*.

diligently, and extracting spiders from the various holes and crevices. Unhappily I could not persuade this bird to eat anything but living insects, woodlice, and spiders; it would not look at soft food (of which there was plenty in the aviary) but having devoured every spider, insect and woodlouse which it could find, it simply starved itself to death: why a bird which, in winter, will join the Robins and Sparrows round our houses to feed on bread-crumbs, and which is also said to eat seeds and small fruits, should have refused to touch these articles of food, preferring rather to die of inanition, is a mystery. Perhaps, though outwardly calm and natural, this bird inwardly chafed at its captivity, and only living food had the power to tempt it to eat. Anyway the conclusion to which my experience has led me is—If you would keep Wrens as pets, it is safest to rear them from the nest.

FAMILY CERTHIIDÆ.

THIS group of birds is again referred to the *Parinæ* by Seebohm, who remarks that "In their rounded wings, small bastard primary, scutellated tarsus, and large feet with well developed hind toe, the species of this genus *(Certhia)* are typical *Parinæ*:" yet, on the same page, he admits that "The Creepers———are somewhat aberrant members of the Subfamily *Parinæ*," which seems a little contradictory.

It appears to me that, in his classification of birds, Seebohm allowed himself to be too much influenced by the character of the eggs; although the admission of *Accentor* among the Tits was a distinct deviation from this tendency. Much as one respects and admires a man who upholds his own views in opposition to the opinion of a majority, one does not feel bound to follow his lead, unless he can bring forward convincing evidence in support of those views.

The Creepers differ from the Tits in their much longer bills with elongated nostrils, the crown of the head never crested, the tail-feathers stiff and pointed like those of the Woodpeckers, which they also much resemble in their habits: they are distinctly more insectivorous than Tits; and, in their search for food, are

more strictly arboreal in their habits, confining their attentions chiefly to the trunks and larger branches of trees, round which they run in a spiral curve.

Our Tree-Creeper, even in its nidification cannot strictly be said to resemble the Tits: certainly I never discovered true Titmice building their nests behind loosened bark: indeed Seebohm himself admits that "their nests are all either loosely made in holes of trees and walls, or suspended from the branches." Dr. Gadow, however, says that the *Certhiidæ* nest in holes; but, even admitting this, the nidification of the Creepers does not prove their affinity to the Tits, any more than that of the Woodpeckers evidences their relationship to the Parrots.

Family—CERTHIIDÆ.

THE TREE-CREEPER.

Certhia familiaris, LINN.

RESPECTING the geographical distribution of this species, Dr. Gadow says that "it inhabits nearly all the Palæarctic and Nearctic regions. It is found from Ireland and Spain to Norway, Palestine, Persia, Eastern Turkestan, and Western China, being likewise found throughout Russia and the greater part of Siberia. Still more to the eastwards it gradually loses much of the dark colours, so that the white becomes predominant, and all the underparts, including the under tail-coverts, become pure white. We may therefore look upon the birds of Amoor-land, Eastern Siberia, and Japan as a pale race. I have, however, seen specimens from Piedmont and South France *(C. Costæ)* in Mr. Dresser's collection which are nearly as pale as the eastern birds. The Tree-Creepers in Canada, and in the United States, eastward of the Rocky Mountains, are like our European form." *

* Catalogue of Birds, Vol. VIII, p. 325.

In Great Britain it is pretty generally distributed, especially affecting well-timbered districts: it has not, however, been recorded from the Outer Hebrides.

When adult this species has the upper surface dark brown, with pale buffish centres to the feathers, the lower back and rump more rufous; wing-coverts tipped with pale buff; flights dark brown with paler bars, the secondaries with buffish-white tips; tail-feathers rufous-brown with paler shafts; a whitish superciliary streak; under surface silky-white, the flanks and under tail-coverts suffused with buff; bill dark brown above, yellowish below; feet brown; iris hazel. Sexes similar, excepting that the female is slightly smaller than the male. The young have a much shorter and straight bill.

This interesting little resident bird, owing to its mouse-like manner of creeping over the bark of trees, is often overlooked, for excepting when its conspicuous white underparts come into view, as it passes rapidly round the side of a trunk, it is not easily seen: moreover, I have noticed that, when it becomes aware of an onlooker, it immediately slips round to the opposite side of the tree upon which it is seeking its insect food, and then only its weak note *cheet-cheet* reveals its presence. In the outskirts of the Kentish woods,* I have once or twice caught a glimpse of it rapidly traversing the trunk of some large tree in an ascending spiral until it reached the branches, passing round one of these for a short distance then fluttering with undulating downward flight, almost to the roots of another tree, which it ascended in like manner; but I never could get very close to this little bird until one autumn, when from my bedroom window, I saw two specimens ascending the trunk of an oak-tree in my front garden and was able to note how they stopped at every two or three feet to probe some crevice in the bark.

W. Warde Fowler, in his "Summer Studies of Birds and Books," has an interesting note on the song of this bird as heard by him in Switzerland; he says:—"When I was last at Bern we did not stay there long, but went on in the afternoon to the Hotel Bellevue at Thun, where there is an extensive garden. Next morning I was out before breakfast in this garden, and soon heard a voice that was new to me. If this happens after May, when all the foliage is out, I know I may be teased for a while, and so it happened that morning. Wherever I went, there was the mysterious voice—clearly that of a very small bird, feeble and shrill, though contented and unobtrusive. Five little syllables of different length were constantly repeated, getting a little higher in pitch towards the end: '*twee-twee-tw-twee-t.*' It was late in the morning when I found that it was nothing in the world but our common little Tree-creeper. Now, I can count on my fingers

* In the Blean woods, near the village of Herne, formerly one of my favourite Entomological hunting grounds.

the number of times that I have heard the Creeper sing, and on those rare occasions in England I have never heard the notes I have just described. But there is no doubt that birds speak with a different accent in different localities."

There is not the least doubt that this is the case, for it is a fact well known to bird-catchers, and it only shows the importance of a careful study of bird-song. Without question, the late Mr. Witchell, though some of his theories as to the origin of bird-music seem somewhat strained and improbable, has done good work by his researches in this direction.

The Tree-Creeper commences nidification towards the end of April; usually selecting as a site an opening behind the partly detached bark on the trunk of a tree, less frequently, a crevice left by the breaking away of plaster in an out-building, in a woodstack or heap of bricks, occasionally behind the eaves of a shed, or even (so it is said) "in the foundation of the nest of a large bird of prey." The nest itself is usually placed on a foundation of twigs, the outer walls being formed of finer twigs intermixed with roots, and lined with fine root-fibre, moss, grass, fine strips of bark, and sometimes a few feathers. The eggs which are stated to number from six to nine in the first nest, and from three to five in the second, are pure white, spotted and sometimes blotched with reddish-brown, and with greyish-lavender underlying markings; the spots frequently form a well-defined zone round the larger end, sometimes they are few and dark, sometimes scattered and paler.

A nest in my collection pronounced by Mr. Seebohm to be unquestionably that of a Tree-Creeper, is a somewhat flimsy little open cup which was built in a cluster of twigs projecting from the trunk on an oak-tree at a height of about eight feet from the ground; it contains six well-marked zoned eggs: another distinguished Ornithologist to whom I showed this nest, was of opinion that it was that of a subspecies or phase of the Wood-Warbler (or a bird so exactly like that species, that its singular type of nest alone served to distinguish it). He told me that he had seen others of the same character and from similar sites. This nest has a good deal of spiders' silk in the lining.

In addition to insects, the Tree-Creeper (like all insectivorous birds) is very fond of spiders; it is said also to eat the seeds of the Scotch fir.

Although hardly a suitable subject for cage-life, I have seen several examples, probably hand-reared, at bird-shows; in a large aviary they would be more interesting, though perhaps difficult to feed.

Family—CERTHIIDÆ.

THE WALL-CREEPER.

Tichodroma muraria, LINN.

THE claim of this species to be called British is very slight: one example having been shot in Norfolk and recorded in a letter to White, of Selborne, in 1792; and a second in Lancashire, in 1872, mentioned by Mr. F. S. Mitchell. A third specimen, obtained in Sussex, has recently been brought to light by Mr. W. Ruskin Butterfield.

FAMILY MOTACILLIDÆ.

THE Wagtails, or "Dish-washers" and "Whip-jacks" as the peasants call them, are the most graceful of all our British birds; they are characterized by their long slender bills, legs, and tails; by the minuteness of the tenth primary or remicle in the wing; the tarsus scaled in front, but not behind. The Pipits are nearly allied to the above, but have somewhat shorter tails in proportion to their wings, the feathers of the tail also forming a slight fork at the extremity.

The *Motacillidæ* pass through a complete moult in the autumn, like other Passeres; but if, as has been stated, they moult again in the spring, I can only say that the species which I have kept in cage and aviary, must have swallowed the feathers which they shed (which is improbable to say the least of it): the change into the breeding plumage is very gradual, the colour growing in the feathers themselves. The supposed moulting of many birds in spring, seems to be mysteriously dispensed with in favour of a change of colour, as soon as they

are brought under close observation. In some birds, however, a few feathers, which represent a sort of winter coat, drop out during the change of plumage: this is certainly the case with some, if not all of the African Weavers,* (whether *Viduine* or *Ploceine*); although most of the marvellous transformation in these birds is produced as a general rule by change of colour, and the growth of new overlapping flank and tail plumes.

As aviary birds the Wagtails are among those most easy to keep and tame; and, provided that a little insect food can be given occasionally, no birds are less trouble to their owners.

Family—MOTACILLIDÆ.

THE PIED WAGTAIL.

Motacilla lugubris, TEMM.

CHIEFLY confined to the western countries of Europe, this Wagtail occurs also in N.W. Africa: in the autumn stragglers have been killed from Nice to Sardinia, Sicily, and Malta. In Great Britain it is common and generally distributed, and excepting in the extreme north, whence it migrates southwards at the approach of winter, it is a partial resident.

The colouring of this bird in breeding plumage is very pleasing; the upper parts intense silky black, but the forehead, sides of head and a more or less prominent streak or patch (confluent with the latter) on the sides of the neck snow-white; wing-coverts and innermost secondaries margined with white; two outermost tail-feathers on each side mostly white; quill feathers of wings blackish

* I employ the term only for those birds called Weavers by aviculturists, not for all the members of the family *Ploceidæ*.

brown; chin, throat, and breast black, the latter confluent with the black on the shoulder; belly white; the sides and flanks blackish; bill and feet black; iris dark brown. The female is similar, but somewhat greyer above. Young birds have the white areas tinted with yellow; the upper parts grey, shading into blackish on the upper tail coverts; under parts slightly paler, fading into whitish on the under tail-coverts.

After the autumn moult the entire colouring is less pure, and the black of the chin and throat are replaced by white.

Although usually seen in the neighbourhood of streams, dykes, pools, ponds, and puddles, it is not uncommonly met with far from water in grazing-ground, ploughed fields, especially when the furrows are newly formed; whilst in the winter it often enters gardens, and approaches close to the houses of the owners, if rendered hungry by stress of weather. Old brickfields are a common resort of this species, more especially where the emptied clay-deposits have filled up with water, and their margins have become fringed with coarse vegetation: indeed all Wagtails seem to delight in such a scene of desolation, for on one morning about the end of May, 1883, I saw the Pied-, Blue-headed-, and Yellow Wagtails in a large field of this description at Murston, near Sittingbourne, Kent.

The springy see-sawing of the tail, common to all the *Motacillidæ*, has probably earned for them in Kent the title of "Whipjack," whilst the fondness of Wagtails for bathing in shallow water explains their more wide-spread nickname of "Dish-washer;" the latter name and that by which they are known in Sussex—Chizzic (the origin of which is evident) apply more particularly to the Pied Wagtail than to the others.

The song of this species is very pleasing; not unlike that of a Swallow: personally I prefer it to that of the Linnet, inasmuch as it is purer and less chuckling in character and better sustained, though not so loud and much more rarely heard. In flight, as on the ground, the actions of this and all Wagtails are graceful; for on the wing they move in a series of wide undulations or dips, but on their slender nimble legs they walk with head erect but slightly bobbing forward at each step; or they run, with head lowered and craned forward: their power of turning in the air is astounding; few insects, however eccentric their flight, can hope to escape them. If a Wagtail is on the ground and it sees an insect flying towards it, instead of at once starting madly forward to meet its prey, it excitedly watches all the insect's movements, and suddenly (when the latter is almost overhead) the agile bird rises with a rapid spiral movement which looks almost like a somersault, the snap of its mandibles is heard and all is over. In sunny weather one may frequently see the Pied Wagtail running along the

ridge of a roof, a stone coping, or an old wall, catching the flies as they start up at its approach, and frequently uttering its cheerful little cry "*chizzic*," as each new victim is perceived: whether this is its call-note or the shrill monosyllabic short whistle (into which the bird can throw so much expression that it almost seems to speak) I do not know for certain, but I am inclined, from long study of this species in captivity, to believe that "*chizzic*" is merely a cry of excitement.

The Pied Wagtail usually builds its nest in hollows in banks, sides of deserted chalk-pits, Sand-Martin's holes, gaps in brickwork under rustic bridges, in a hole in a wall just above water, or a crevice in a rock; but it sometimes places it in gnarled roots of trees, in faggot-stacks, in ivy on the top of a low wall, and I once took one formed in a deserted Blackbird's nest built in ivy on the top of the trunk of a branchless oak. Nidification lasts from April to June, but most nests may be found towards the end of May: indeed my experience would incline me to regard none of the Wagtails as early breeders, though forward individuals may be ready to nest in April.

The nest is constructed of dry bents, rootlets, and a little moss, and is thickly lined with wool, or feathers and hair: it is somewhat large and shallow in character, frequently with one side higher than the other, if it be possible for a circular rim to have sides. The eggs vary in number from four to six, the latter being a frequent clutch; in colouring they are tolerably uniform, differing chiefly in the paler or darker ground tint (though it is always light) and more or less heavy speckling at the larger end; the ground colour is either a greenish-white or pale greenish-grey, the speckling is grey or smoky-brown (a few of the dots often approaching black) some of the markings being more prominent than others. The House-Sparrow sometimes lays a similar egg, only generally of a more elongated shape.

The Pied Wagtail is largely insectivorous; but, in addition to insects, their larvæ, spiders, centipedes, and (according to the late Mr. Booth) the ova of a small crab, I believe that in the winter seeds are swallowed by it. At any rate this is certainly the case in an aviary, though not often.

In September, 1888, I purchased my first captive Pied Wagtail from a bird-catcher. It was decidedly a domineering bird, and was long before it became tame, knocking out all its tail-feathers in the first few months of its confinement in a large aviary, nor did it recover them until the following July: it lived about eighteen months, after it had starved my hen Grey Wagtail to death by incessantly driving it from the soft food.

In June or July, 1892, a nest of six of these birds was shown to me in a field a short distance from my house; the site for the nest was rather curious: a

number of boards had been piled up near a fence by the builder who owned the ground, and when he wished to utilize them he discovered the nest built below one which had been tilted up. I examined the nest and found that the young were just ready to take, but hesitated to secure them, as my holiday was almost at an end, and the duty of feeding would devolve upon my wife. I, therefore, crossed the field and with a field-glass watched the parents arriving incessantly with food for about an hour: they appeared to have an unusual amount of white on the neck, and I took them at first for White Wagtails, but the young were certainly Pied.

My wife having undertaken the duty of feeding during the day, I sent my man for the nest in the evening, but it was empty, and a cat was seen slinking away. Next morning, however, one young one shivering with cold and wheezing badly, was discovered behind a board: under careful treatment it soon recovered, and was reared without trouble upon crushed tea-biscuit, preserved yolk of egg, ants' cocoons, and Abrahams' food for Insectivorous birds, mixed together and moistened. We found this little Wagtail a very interesting pet: in the summer we let him fly about the dining-room, where he delighted in playing the game of hide-and-seek, keeping quite still until discovered, when he excitedly shouted *chizzic*, *chizzic*, and ran out from his retreat: he was absolutely tame, fighting with us after the manner of a Canary. When tired of flying about he always returned to his cage of his own accord and jumped up to his perch.

As a rule, and especially during the winter months, when we were afraid to let "Chizzic" out, on account of fires, his cage was kept in my conservatory; and, if my wife went out there without stopping to have a fight, he shouted to her in a most reproving tone: his excitement when she poked her finger through the bars was ludicrous, he screamed with excitement and (although it is difficult to imagine how a bird-face can be made to express glee) he undoubtedly appeared to laugh much as one sees a dog do when playing. He was always ready to fight me, but never showed the same madcap hilarity as with my wife. On several occasions when my servant played with him, he half spread his wings, arched his back, depressed his tail, and sang the true wild song to her: sometimes in the spring he sang from his perch, but not often.*

All insectivorous birds make more or less interesting pets when hand-reared; but none are so satisfactory as the Wagtails (doubtless the other species would be quite as pleasing as the Pied); even when caught wild, most examples of *Motacilla* soon become tame if kindly treated: they are easy to feed, living for years upon crumbled household bread, yolk of egg and ants' cocoons, moistened (either by the

* Since I first described him, little "Chizzic" has passed away: even to the last he tried to bear up, making an effort to play at fighting when so weak that he staggered wildly in his walk.

WHITE WAGTAIL ♂ ad.

PLATE 48.

addition of a little water or mashed potato) and a few insects, their larvæ, or spiders from time to time. But, unless hand-reared neither the Pied-, nor any other Wagtail, should be kept in a cage; and certainly, when possible, the liberty of a room should be allowed for a short time each day to a caged specimen; even then, at its autumn moult the pet cage bird fails to cast the scales on the tarsi, which yearly pile up on the front of its feet and much disfigure it.

Family—MOTACILLIDÆ.

THE WHITE WAGTAIL.

Motacilla alba, LINN.

DISTRIBUTED over the whole of Europe and breeding as far north as land extends: it is also believed to breed in Egypt, and it certainly does so in the Highlands of Palestine, Asia Minor and Persia, to which countries it is also a winter visitor. In the autumn the European birds travel southwards, wintering in Southern Europe, North Africa, southward to Senegal and eastward to Zanzibar. It is also said sometimes to visit the Canaries.

Mr. Bond first recognized this as a British bird in 1841, since when it has occurred more or less commonly in Cornwall, Devonshire, the Isle of Wight, Kent, Middlesex, Cambridgeshire, Huntingdonshire, Suffolk, Norfolk, Lincolnshire, Nottinghamshire, Yorkshire, Lancashire, Cumberland and Northumberland. In Scotland it has been seen as far north as Inverness and even in Shetland; it has also occurred on the island of Lewis after rough weather. From Ireland only one authenticated specimen is recorded.

The White Wagtail in general appearance, habits, and nidification, nearly resembles the Pied species, but differs in the grey colouring of its back and lesser

wing-coverts; the white on the cheeks and sides of neck extended, so as completely to disunite the black of the crown and nape from that of the throat and breast; the tail also is said to be longer, but this is certainly a variable character. The female is rather duller than the male, and generally has the throat nearly white, but sometimes with darkish brown feathers, especially at the sides; she also shows no black on the nape and back, as in the Pied Wagtail.

It is evident that the White Wagtail is not aware of the importance of the above distinctions, inasmuch as there are certainly two instances known of its pairing with the Pied species in a wild state, one of these being represented by the nest exhibited with old birds and young at the Natural History Museum, obtained in Norfolk by Lord Walsingham.

Mr. Frohawk and I saw a fine example of this species in Kent, but we failed to secure the specimen: it would have been very useful for the present work.

Several instances are on record of the "Water Wagtail" (which might mean either the Pied or the White Wagtail) making its nest under a railway truck, between the axle-box and axle-guard. In one such instance (described in the "Zoologist" for January, 1893, p. 30) the nest was discovered in November with "two eggs, one quite warm, having been recently laid." It does not, however, follow that, because a bird continues to roost on a nest containing unhatched eggs, the latter are necessarily recently deposited. I have known many birds in captivity to retire to their old nests when they have felt unwell, or in cold weather, and it is quite likely that they also do the same when at liberty.

GREY WAGTAIL [illegible]

PLATE [illegible]

Family—MOTACILLIDÆ.

THE GREY WAGTAIL.

Motacilla melanope, PALL.

HOWARD SAUNDERS gives the following as the distribution of this species outside Britain:—"On the Continent the Grey Wagtail barely reaches the extreme south of Sweden, and is very rare in Northern Germany, while in Russia it is hardly found beyond the latitude of Moscow; but in the mountainous and even rolling ground of the central and southern parts of Europe it is fairly common; breeding as far south as the basin of the Mediterranean, where it is a resident, as it is also in the Canaries, Madeira, and the Azores. Eastward, it is found in summer across Asia, south of about 67° N. lat., to Persia, Turkestan, the Himalayas, Northern China, and Japan; wintering in India, Burma, the Indo-Malayan Islands, Palestine, and Northern Africa."

In Great Britain the Grey Wagtail is resident, breeding chiefly in the mountainous districts, though occasionally in the plains: it is somewhat local in England, Wales, and Ireland, being more frequently seen in the south of England during the winter than the summer months.

In breeding plumage the male of this exceedingly graceful bird is chiefly slaty-grey above, the head slightly darker; but the rump and upper tail-coverts are greenish-yellow; the wing coverts brownish-black with pale margins; flights blackish-brown; the secondaries margined with buffish-white; the three outermost tail feathers white; the second and third pairs with a great part of the outer web brownish-black; the six central feathers brownish-black edged with greenish-yellow; a narrow arched white superciliary stripe; a second white stripe from the base of the lower mandible to the neck, bordering a black gorget which covers the throat and breast; remainder of under surface bright sulphur-yellow; bill black; feet brown; iris dark-brown. The female is slightly smaller than the male, has a shorter tail, duller colouring, and little or no black on the throat. After the autumn moult the black disappears entirely, the throat becoming white and the breast tinted with sandy-buff. Birds of the year are like adults in winter plumage,

excepting that they are browner above, with the superciliary stripe and under surface washed with buff.

The Grey Wagtail is especially fond of the vicinity of water, haunting mountain streams, rushing rivers, and tumbling torrents: such localities as the Dipper delights in, form the chosen home of this most elegant of all the *Motacillidæ*. But it is not only seen in the wilder regions, even during the breeding season; for a few pairs remain to bring up a family even in the most level and prosaic parts of the southern counties; and, in the autumn and winter months, it not uncommonly becomes a prize of the bird-catchers of Kent and Surrey, who by no means regard it as any great capture, but willingly part with it at prices varying from ninepence to eighteen pence according to the purchaser.

Early in the year of 1896, our postman informed me that a foreign bird had flown into his house, and asked if I had lost one. I replied in the negative and asked for information as to its form, colouring, etc. Finally he fetched it to show me, and I at once recognized it as a male Grey Wagtail just commencing its change of plumage: the man had been trying to feed it on Canary-seed, and when he discovered that it would need special soft food and insects, he willingly gave it to me.

The Grey Wagtail, in its actions, flight, song, and expressive notes, much resembles the other forms; but it is more solitary than either the Pied or Yellow Wagtails; each pair appearing to occupy an area apart from others of its own species; whereas one may see three or four pairs of either the Pied or Yellow Wagtails within the limits of a comparatively small area during the breeding-season. In the Autumn only does the Grey Wagtail appear to be more sociable, because the young usually accompany their parents until winter is well advanced.

The Grey Wagtail is double-brooded, usually commencing its first nest in April, Seebohm says "towards the end of April or early in May," Howard Saunders says "in the latter half of April in England, but earlier in the south of Europe," whilst an observant Scot, John Craig, in a letter to the "Feathered World" (May 8th, 1896), insists upon it that in North Ayrshire it "begins to lay in the first week of April"! Speaking of it in the Parnassus, Seebohm observes "I obtained several nests of fresh-laid eggs in the middle and end of May; but these appeared to be second broods, as I shot several young birds of the year."

As a rule this bird selects a rocky bank, a hole in the wall of an old water-mill, or a crevice in a bank, under an overhanging ledge and well concealed by rank herbage; but there is no rule without exceptions, for Seebohm says he once "saw one built in the fork of three stems of an alder, close to the ground, almost overlapping the river"; whilst I took a nest in Kent (from which we flushed the

female bird) built in a furrow of a ploughed field near the creek at Kemsley, close to Sheppey.* This nest is constructed of root fibre, interwoven with coarse dry grass, cow-, and horse-hair; the lining being very thick, and formed of black horse-hair, white cow-hair, and wool. The usual materials, according to Seebohm, are fine roots, with a few stalks of dry grass in the outer and coarser portions, and a lining of cow-hair, the preference being given to white; Howard Saunders adds moss to the outer walls, and does not specify the nature or colour of the hair-lining; Lord Lilford says that it "much resembles that of the Pied Wagtail, but is considerably smaller": other authorities mention feathers as forming part of the lining, but Wagtails are not much addicted to the use of such material.

The eggs, according to several authorities, are smaller than those of the Yellow Wagtail; although the Grey Wagtail is by far the larger bird: in my nest, however, the eggs were fully as large as the largest eggs of the Pied Wagtail, and in my opinion Lord Lilford's description is most likely to be accurate; at any rate it exactly accords with my solitary experience:—"The eggs are usually five in number, of a creamy white, closely blotched or clouded with pale yellowish-brown, and may be distinguished from those of the commoner Yellow Wagtail (*Motacilla raii*) by their larger size and the absence of the hair-like dark streaks which in most cases are found on the eggs of the latter bird." Unless a man not only takes the nest himself, but actually sees the parent bird leave it, the nest alone is not sufficient evidence on which to identify the eggs of one of these yellow species of Wagtail; yet there is no doubt that, in many cases, their identification rests upon no better basis than the assertions of rustics, who almost invariably confound the Grey Wagtail with the Yellow.

The food of the Grey Wagtail consists largely of insects, their larvæ, centipedes, spiders, and small mollusca; but in winter the last-mentioned, small worms, and a few seeds of weeds are eaten.

My first experience of this charming bird in captivity, was in September, 1888, when a friend netted two females and gave them to me; I turned them, at first, into a large cage, but one of them refused to eat, and died the following day: the other bird I transferred to a large aviary, where, in three days, it became so tame that it not only took mealworms from my fingers, but ran between my feet as I stood in the aviary; moreover within a year it followed me about; and whenever I passed by the aviary, it flew up to the wire and called me. Unhappily I turned in a cock Pied Wagtail with it, and the latter bird so persecuted the

* This nest was first observed by the plough-boy whilst guiding his horses, and knowing that I was collecting nests and eggs he carefully avoided it, so that it lay on the side of the furrow, a clod of earth partly protecting it.

poor thing (invariably chasing it away from the food pan when it attempted to eat) that, early in December, 1889, it died of starvation.

Several years later (1892) Mr. Staines, of Penge, formerly a rather successful exhibitor of Wagtails, gave me a male of this species which had been for some time in his possession; I turned it out into a cool aviary, where it came into superb plumage, and soon became very tame; though less so than my first (female) example: this and a second male, previously referred to, were still flourishing when I wrote this article, but Mr. Staines' bird subsequently died (August 1896).

Family—MOTACILLIDÆ.

THE BLUE-HEADED WAGTAIL.

Motacilla flava, LINN.

SEEBOHM gives the following as the geographical distribution of this species: "extending from the British Islands across Europe and Asia at least as far as the Rocky Mountains of America. It is common across the Channel, and is found in Scandinavia south of lat. 60°, which appears also to be the northern limit of its range in Russia. In Western Europe it is found down to Gibraltar, and crosses the Straits into Tangiers; but in Eastern Europe it does not breed so far south. It passes through South Russia, Greece, and North-east Africa on migration, and winters in South Africa, whence it has been received from Damara Land, Natal, and the Transvaal. In Asia it is said to have about the same range to the north, but in Alaska it breeds up to lat. 64°. It breeds throughout South Siberia, Mongolia, and North China, wintering in India and Burma. In Turkestan it is only known on migration. It is doubtful whether it has occurred in Persia, but it breeds in the Caucasus."

In the British Islands the Blue-headed Wagtail has chiefly occurred in the

BLUE-HEADED WAGTAIL

PLATE [illegible]

southern, south-western, and eastern counties during the breeding-season, nests having been recorded from Kent and Durham; it has occurred a few times in Scotland and Ireland, and has been seen in Shetland in the Autumn.

The adult male in breeding plumage has the forehead, crown, and nape bluish-grey; back yellowish-olive, browner on the upper tail coverts; wing-coverts dark brown, tipped with yellowish-white; flights dark-brown; secondaries with yellowish-white margins; tail feathers, excepting the two outer pairs, blackish-brown; the outer ones white, their inner webs edged with black; lores and ear-coverts deep slate-grey; a white superciliary streak, and a second white streak below the lores; chin white; remainder of under surface bright canary-yellow; bill and feet black; iris hazel. The female is duller in colouring, and the head is more olivaceous. Young birds have the breast spotted with brown, and otherwise closely resemble the female. The white eye-stripe is always present at all ages in both sexes.

I met with this species in life about the end of May, or beginning of June, 1883, when I saw it in company with the Yellow Wagtail in an old deserted brickfield at Murston, near Sittingbourne; it was running along the margins of the reedy pools (produced by the removal of the brick-earth and the subsequent winter rains), flying up from time to time with a shrill cry which resembled that of its Yellow congener, a sort of *scizzur* to my ear, though it has usually been rendered *chit-up* by writers on British Birds.

Two years later Mr. William Drake, of Kemsley, near Sheppey, sent me a nest found by one of his boys among the long wiry grass on the saltings near the creek, informing me that it was the nest of a Yellow Wagtail, as the boy had seen the birds, which he described as having a "black head with white ring," evidently referring to the superciliary and subloral white streaks, the head probably appearing, at a short distance, to be blackish in contrast with the yellowish colouring of the back: the eggs (six in number) are for the most part almost indistinguishable from those of the common Yellow Wagtail, but one or two are distinctly mottled, and correspond exactly with authentic eggs of the Blue-headed species in my possession.

In his "Birds of Norfolk" Stevenson mentions the occurrence of this species at Sherringham, Yarmouth, and the Heigham river: he also records the fact of its having been shot on more than one occasion at Lowestoft (Suffolk) and at Stoke Nayland. Although only a visitor to our islands on migration, this species is probably a tolerably regular one; moreover, the fact that it undoubtedly breeds with us, fully entitles it to be regarded as a British species. Herr Gätke observes: "As one might expect, it also visits Heligoland in very large numbers during both migration periods—though naturally its numbers are incomparably larger in

autumn than in spring; but even during the latter season, if the weather is tolerably favourable, flocks of hundreds may be seen covering the sheep pastures."

W. Warde Fowler, in his "Summer Studies of Birds and Books" says:—"A few of these seem to come to us every year; and just as it is worth while always to look at Pied Wagtails to make sure that they are not White Wagtails, so it is as well to glance at all yellow birds we see, in case we should some day meet with one that has a distinctly bluish head, and a white stripe over the eye instead of a yellow one. A beginner, indeed, may easily confuse the female of the common species for the rarity he is looking out for; and he should never be satisfied until he has watched his bird at a very short distance, and if possible with a good field-glass.* Though Oxford is a favourite haunt of Yellow Wagtails, I have in the course of many years detected but two or three of the rarer species."

Charles Dixon says that he met with the Blue-headed Wagtail in Algeria "in flocks in the oases, apparently on migration, in May." (Birds of Algeria, p. 65). Occurring there so late in the year, one would almost expect that a few pairs would breed there, as they are known to do in North-eastern Africa (cf. Seebohm, Hist. British Birds, Vol. II, p. 209.)

Nidification takes place with this species between the middle of May and the first week of June; the nest being placed on the ground amongst coarse herbage, frequently under a tuft of grass in meadows or cornfields, sometimes in the bank of a dry ditch: it is somewhat loosely constructed of fine rootlets, grass, straws, and bents, sometimes with an admixture of moss; and is lined with horse-hair, wool, or fine bents; occasionally with wool and a few downy feathers. The eggs number from four to six, and are either pale yellowish brown, with a fine black streak on the larger end, or yellowish white, mottled and clouded with pale brown, both types with intermediate grades sometimes occurring in the same clutch.

The food of this Wagtail consists of insects and their larvæ, spiders, centipedes, and small freshwater mollusca: but in confinement it would doubtless feed on the usual soft food, like all its congeners, and would make a most desirable and interesting addition to an aviary.

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* Excepting when collecting nests and eggs in dense woods, where it was often necessary to force my way through bramble and hawthorn, I usually carried a powerful little glass in my pocket: this enabled me, not only to recognize species, but to watch the birds to their nests.—A. G. B.

Yellow Wagtail [illegible]

Plate [illegible]

Family—MOTACILLIDÆ.

THE YELLOW WAGTAIL.

Motacilla raii, BONAP.

ACCORDING to Seebohm, this species "breeds in the north of France, passes through the south of France, Spain, and Portugal on migration, and occasionally strays into North-west Italy, in all of which districts it is possible that a few remain to breed. In Africa it has been found in winter as far south as the Transvaal on the east coast, and has occurred in Gambia, the Gold Coast, and the Gaboon on the west. An isolated colony appears to exist in South-east Russia and West Turkestan."

To Great Britain the Yellow Wagtail is a summer migrant, being generally distributed in England, excepting in Cornwall and Devon, where it is, however, seen on migration. In Scotland it is far more local, being most common in the southern counties, nevertheless it has perhaps been met with in Sutherlandshire, and is believed to breed in Inverness and Aberdeen; its occurrence in Orkney and the Shetlands has been reported, but the statements need verification. In Ireland it is not only very local but rare, though it is known to breed near Dublin and at Lough Neagh.

The male in breeding plumage has the upper parts for the most part of a bright yellowish-green colour, forehead more yellow, and upper tail-coverts slightly more olive: wing-coverts and flights smoky-brown, tipped and edged with pale buff; tail blackish, the two outer feathers on each side white, with black edging to the inner webs; a sulphur-yellow streak over the eye and ear-coverts; the latter and the lores yellowish-olive; under parts bright canary-yellow; bill and feet black; iris hazel. The female is browner above and paler below, and the superciliary stripe is yellowish-white. After the autumn moult both sexes become duller and less yellow. Birds of the year are slightly browner than the female on the upper parts; the throat pale yellowish-buff, becoming browner on the breast; abdomen pale yellow; the sides of the neck and breast more or less streaked or spotted with brown.

This species reaches our shores early in March, arriving in Scotland about

the beginning of April: the return migration taking place in September and October.

The fondness of this Wagtail and its Blue-headed relative for the pastures in which cattle are grazing is well-known, the attraction being the flies which collect round and torment these animals. They also follow the plough and feed upon the wireworms and other beetle-larvæ which are turned up in the furrows; also in the fields, in which spring sowing is being carried on, they doubtless find many small worms and spiders. Like all the Wagtails they are fond of bathing, and consequently are frequently met with near streams and dykes; or in deserted brickfields, where the winter rains have formed pools, surrounded by coarse grass and nettles.

W. Warde Fowler, in his "Summer Studies," p.p. 109-10 has the following interesting account of a large assemblage of this pretty species:—"These most charming birds come to Oxford about the middle of April. They come up the river, and gather in great numbers on that vast meadow above the city known as Port Meadow; which almost deserves a chapter to itself, so interesting is its history, so rich its treasures of birds and plants, and so various its aspect in flood and frost, under sunshine and shower. Here, on the 26th of April, 1887, I saw a more wonderful gathering of Yellow Wagtails than I have ever seen since, or am ever likely to see again. Mr. Arthur Macpherson had come into my rooms the evening before, to tell me that he had seen some Dunlins on the bank of the Isis, where it bounds this great meadow to the west. As these birds of the sea-shore had never before been reported to me, I started the next afternoon, hindered and baffled by a strong and bitter wind which soon turned to pelting rain, and by a toothache which raged in sympathy with the elements; but I was rewarded for my pains. I found the Dunlins; but I found also what was far more wonderful and beautiful—the whole length of the river's bank, on the meadow side of it, occupied by countless Yellow Wagtails. As I walked along they got up literally from under my feet; for they were sheltering just beneath the meadow's lip, and I came upon them quite unawares. When a turn in the bank gave me a view ahead, I could see the turf spotted all over with the brilliant yellow of their breasts; for I was walking with the wind, and they, of course, were facing it, to avoid having their plumage uncomfortably handled by the gusts.

They were not afraid of me, and settled down again directly I had passed on, so that my progress was like that of a haymaking machine, which just lifts the hay as it passes, and then lets it settle down again after dallying a moment with the breeze. These birds had clearly only just arrived after their long journey from Africa, and I think they must have come together and unpaired; the greater

number of them were males. Their numbers diminished regularly day by day, and at the same time I began to see pairs in their usual places in the neighbourhood evidently preparing to nest. In a few days they were nearly all distributed over the country-side."

The site chosen for the nest is frequently a furrow or depression in the earth in a pasture or cornfield, partly concealed by coarse herbage or a dislodged grassy clod, sometimes in the side of a deep pit partly filled with water and overgrown with rank grass and nettles, or in a sloping bank covered with weeds and wild flowers, or again among the long coarse grass at the foot of a wall. It is by no means an easy nest to find, for it never seems to be exposed like that of the Pied Wagtail, and therefore is more often discovered by accident than by design: that is to say, when carefully searching every foot of ground with a view to securing a possible nest of Sky-Lark or Tree-Pipit, one maystumble upon that of the Yellow Wagtail. The nest is constructed of coarse dry grasses and rootlets, lined with finer rootlets, fine bents, black and white hair, or sometimes with green moss, rabbits' down, or sheep's wool: feathers are said to be occasionally used.* The eggs number from five to six, and usually closely resemble those of the Sedge-Warbler, excepting that they are larger; the paler varieties are greyish-white more or less densely mottled with pale clay-colour; but more often this mottling spreads uniformly over the whole surface, rendering the shell uniformly pale stone-brown, (like some eggs of the Partridge) there are usually one or two short black hair-lines at the larger end.

The call-note is a soft monosyllabic whistle, and the note of excitement a shrill *scizzur:* the song, which is rarely heard, somewhat resembles that of the Swallow.

My first experience of this species in confinement was a short one. In the winter of 1889-90, a bird-catcher brought me a specimen which he had carried about in a cage with linnets and other birds all day; no water being supplied and only seed being available for food: the poor thing was so exhausted that it died the following morning. My second bird was given to me in 1894, by Mr. Staines, of Penge, who had already had it in a room for some time. I turned it out into a cool aviary with my Grey Wagtail, where it spent the winter without mishap, though the temperature on one or two occasions registered twelve degrees of frost: in the spring it came into grand colour, and then began to persecute its Grey relative, so that eventually I had to place it in a large flight-cage: this I suppose it resented, for (shortly after I had acquired what I then supposed to be a hen) in the autumn of 1895 it died. My third bird I purchased from a bird-catcher,

* I have not, however, met with this material in the lining.—A. G. B.

and turned it out at once into the aviary with the Grey Wagtail, and insectivorous bird though it is, it no sooner saw the latter eating the soft food than it followed the good example and saved me all anxiety. In the spring of 1896, I was astonished and pleased to see this bird gradually develop the brightest male plumage which I have ever noticed in the Yellow Wagtail: indeed a reputed Canary-breeder who came to see my birds, after looking at the brilliant tropical colouring of Weavers and Cardinals with lack-lustre eye, suddenly became eloquent as he came in sight of my Yellow Wagtail, exclaiming excitedly—"O! I should like to have that Canary!" He cannot have known much about his favourites; perhaps he mistook the Wagtail for an extra fine Scotch-fancy bird.

In a wild state the Yellow Wagtail feeds upon insects and their larvæ, spiders, centipedes, and small worms: in confinement it requires a few insects, cockroaches answering the purpose as well as anything; but as staple diet, the same food as that given to all insectivorous birds answers admirably: it usually commences on the yolk of egg and ants' cocoons, only eating the bread and potato, as a last resource, when other ingredients fail.

Mr. Septimus Perkins, in "The Avicultural Magazine," Vol. I, p. 126, published some interesting notes on this species:—"Some few years ago, while living in the Midlands, I possessed a fair-sized in-door aviary, in which I kept a good many migratory British birds. Here I kept the Yellow Wagtail along with the smallest and most delicate Warblers, and I never found that he did them the slightest injury, although he was sometimes just a little tyrannical. But two male Wagtails, whether of the same or different species, will quarrel and fight.

This bird is a somewhat large eater, and takes very kindly to hard-boiled egg, though he likes Abrahams' Preserved Egg even better, because that is all yolk. He should have as much egg as he will eat, and as many soaked ants' eggs as he will eat. Also three or four mealworms a day, and as many flies and small caterpillars as you can take the trouble to catch.

The Yellow Wagtail is a tender bird, but I do not consider him nearly so delicate as the Warblers, he eats more heartily of artificial food than they do, and consequently does not require so many mealworms."

Mr. Perkins then goes on to recommend that soaked ants' eggs should form the staple article of diet: also that the egg should be given in a separate vessel, not mixed with bread-crumbs, which he considers indigestible and not nourishing for insectivorous birds. I must confess that my experience does not support this view; for not only do many insectivorous birds live largely, during the autumn and winter months, upon seed and grain; but they become sleek and fat upon

TREE PIPIT

PLATE 52

this diet. Soaked ants' eggs soon become sour, especially in hot weather; and I find that when dry or only slightly damped, birds eat them just as readily. The opinion of Mr. Abrahams, based upon the experience of a lifetime, was also weighty; and he recommended that his food for insectivorous birds should be mixed with double the quantity of bread-crumbs.

In my opinion none of the Wagtails are delicate; but if the birds are overfed, they are far more liable to disease than when fed moderately. It must always be borne in mind, that birds in cage or aviary do not have to seek their food; therefore their tendency is to eat more than is good for them.

Family—MOTACILLIDÆ.

THE TREE-PIPIT.

Anthus trivialis, LINN.

THIS species breeds in Northern and Central Europe from Tromso in Norway south-westwards to the British Isles, the Pyrenees, and the mountains of northen Italy, and south-eastwards as far as the Crimea, to the north-east from the valley of the Petchora, the Ural Mountains, and the valley of the Yenesay in Siberia, also through Turkestan to the Altai Mountains. South of the Pyrenees and Northern Italy the Tree-Pipit is met with on migration and in winter, as also in Morocco and Algeria in N.W. Africa, eastward to Egypt, Nubia, and Abyssinia. It has even been said to occur as far to the south as Caffraria.

In Great Britain this bird only occurs as a summer visitor, being pretty generally distributed and common in England, with the exception of western Cornwall and Wales, where it is scarce; in Scotland it is rarer and far more local, with the exception of the neighbourhood of Glasgow where it is abundant. It has not been met with in Ireland, according to Howard Saunders; but Mr. C. W. Benson (in the "Zoologist" for 1878, p. 348) mentions the occurrence of a pair in

Dublin, and Mr. H. C. Hart states that he found a nest thirteen years previously in the same county.*

The upper surface of this species in breeding plumage is clear sandy-brown, with dark centres to the feathers, less prominent on the rump; wings dark-brown, the coverts and secondaries with paler margins; tail for the most part dark-brown, but the outermost feathers white, with a brown stripe on the inner web, and the next feather on each side broadly tipped with white; a buff superciliary stripe; chin and belly whitish, remainder of under surface buff; a dark streak from the base of the bill to the sides of the neck, where there are other dark-brown streaks and spots, as also at the sides of the breast and flanks: bill brown, the base of lower mandible paler; feet flesh-colour; iris hazel. The female is slightly smaller, and has less defined breast spots than the male. After the autumn moult the buff of the under surface is more pronounced. Birds of the year are more spotted on the breast and flanks, but these markings are smaller than in adult birds.

The shorter and more curved hind claw, larger size, somewhat longer tail, warmer colouring, and paler legs, distinguish this bird from the Meadow-Pipit.

This species usually makes its appearance in England early in April, though sometimes not before the third week, and in the south of Scotland early in May: its favourite haunts are pastures on the outskirts of plantations, shrubberies interspersed with large trees, or woods; also large gardens, parks, tall hedgerows, but more especially uneven hedges, with here and there a tall tree: here one can best observe its curious caricature of the Sky-Lark's upward flight, rising perpendicularly for a short distance and thence, with expanded wings and tails, dropping spirally, singing the while.

In his "Evolution of Bird-song," p. 118, the late Mr. Charles A. Witchell thus renders the song of the Tree-Pipit:—"*Chee chee chee chee cechaw cechaw whee whee whee whee whee whee:* or *cechaw cechaw chee chee chee chee judge judge judge judge whee whee whee whee*, and so on." On p. 119 also, he mentions that the final notes of its early spring song and those of the Sky-Lark are alike, and "consist of a somewhat plaintive, prolonged, and repeated whistle, descending in pitch during its utterance." The late Mr. Witchell had not only studied the songs of our birds very carefully for some time, but had a musical education, which specially fitted him for his task; therefore I consider it far better to quote his version of a song, written down whilst the bird was singing, than to trust my own memory of it.†

As its name implies, this species frequently perches on trees, but it always

* cf Seebohm's British Birds, Vol. II, p. 219

† The call-note is said to resemble that of the Greenfinch, and the alarm-note to be a sharp *tick, tick*, frequently repeated.

nests upon the ground, frequently in the side of a sloping bank on the margin of a wood or shaw, or near the foot of a hedge by the roadside; sometimes far away in the centre of a grass meadow, or cornfield; sometimes on a railway bank: usually the nest is tolerably well concealed, but one which I took from a roadside bank not far from a large wood, was so conspicuously situated that, although it only contained three eggs, I did not dare to leave it until the clutch was complete; but paying a second visit to the same road a few days later I found a fourth egg deposited in the cavity whence I had removed the nest.

The nest itself is formed of dry grass and bents mixed with moss, the materials somewhat finer towards the inside; and lined with a few black horsehairs, as in some nests of the Greater Whitethroat: but occasionally a few rootlets are introduced into the walls, and sometimes the entire structure is made of dry grasses; though all the nests which I have found have been fairly typical. The eggs vary from four to six in number, five being the more frequent clutch: in colouring they differ individually as much as any eggs that are laid, and may roughly be distinguished as—1. Greenish-white, spotted and heavily blotched at the larger end with blackish-brown and lavender; 2. Buff-whitish, densely mottled and spotted all over with olive-brown; 3. Pinky-buff, densely mottled and spotted all over with deep terra-cotta, with one or two black hair-lines or Bunting-marks at the larger end; 4. Ruddy-brown inclining to chocolate, with scarcely perceptible darker reticulations, and black Bunting-marks at the larger end: every gradation may be found between these four types; but, in my experience the intergrades between the olive and ruddy mottled types are the commonest.

As nests may occasionally be met with from May to August, it is very probable that two broods are sometimes reared; but it is believed that this is by no means the rule; because the young, after leaving the nest, remain for a considerable time in their parents' company.

The action of this and all the Pipits is very like that of the Wagtails, as they run upon the earth, their tails spring up and down in the same manner; but in their food they more nearly approach the Larks inasmuch as they not only eat insects and their larvæ, spiders, centipedes, and small worms, but also a good deal of seed, more especially of cereals: in aviaries they often husk and swallow their share of canary-seed. Whether the Tree-Pipit is as combative in confinement as his relative the Tit-Lark I do not know, because I have had no personal experience of the present species as an aviary pet; but, from what I know of the Meadow Pipit, I should recommend that only one example be admitted into a mixed aviary, otherwise I suspect that there would be war to the death.

Lord Lilford, speaking of this bird in Northamptonshire, says:—"It arrives

with us generally in the second or third week of April, and the male bird soon makes his presence known by his loud song, which has some resemblance to both that of the Canary and the Sky-Lark; he also attracts attention by his common habit of soaring from a tree to a moderate height, and descending slowly, singing his best, with tail outspread and legs hanging, to the perch from which he started or another close by it, without coming to the ground: this habit has, in some places, gained him the name of "Wood-Lark"; but I need hardly say that the true Wood-Lark *(Alauda arborea)* is a very distinct bird, which differs from the present species in many essential particulars, and whose song is in every way far superior to that of the Tree-Pipit."

This note of Lord Lilford's is of considerable interest, as I am satisfied that in many parts of England, the Tree-Pipit is confounded with the Wood-Lark; though more particularly by people born and bred in the country; the most difficult of all to convince of their errors.

Gätke says that the Tree-Pipit is one of the few birds which have attempted to breed in Heligoland; "unfortunately the attempt was unsuccessful, for the nest with four eggs of the type with brown spots like burnt marks, was destroyed by cats; it had been placed against a large tuft of grass in the middle of a large hedged-in grass-plot, about a hundred paces in diameter, which adjoins my garden, and was protected against every possible disturbance by human hand."

Family—MOTACILLIDÆ

THE MEADOW-PIPIT.

Anthus pratensis, LINN.

ACCORDING to Howard Saunders the breeding range of this, the smallest of our Pipits, "extends from the North Cape over the greater part of Europe to the Pyrenees, the northern portions of Italy and the Carpathians,

and perhaps to some of the elevated regions still further south; but in the basin of the Mediterranean the bird is principally known as a visitor on migration and in winter. Eastward, it is found in Asia Minor, Palestine, Western Turkestan, and the valley of the Ob in Siberia; while its southern wanderings reach North Africa, from Morocco to Egypt."

Throughout Great Britain the Meadow-Pipit, otherwise known as Tit-Lark, Titling, Moss-cheeper, Ling-bird, etc., is resident, common, and generally distributed: in the autumn the numbers of resident birds are temporarily largely added to, by immense flocks travelling southwards, and it is probable that many of the native specimens join these migrating hordes which leave our coasts and are seen no more until the following March: nevertheless great numbers remain with us during the winter.

The adult male of this species is olive-brown above, the feathers having dark centres, which, however, are less distinctly marked on the rump and upper tail-coverts; wings dark brown, the primaries with yellowish margins to the outer webs; the coverts and secondaries with whitish margins; tail dark-brown, the outermost pair of feathers nearly half white, and the next pair with a white sub-terminal spot; a narrow dull-white superciliary stripe; under surface almost white, the sides of neck, breast, and flanks streaked with brownish-black: bill dark-brown, the lower mandible paler towards the base; feet pale-brown, with long and slightly curved hind-claw: iris dark-brown. The female closely resembles the male, but is less strongly spotted on the breast and streaked below. After the autumn moult the colouring both above and below becomes yellower. Young birds are more buff in tint, with the streaks of the under surface smaller and browner.

This species is most abundant in summer on the upland moors, but is by no means confined to the mountains, for numbers may always be met with throughout the year on the open commons, farm lands, and pastures of the plains; towards winter also, the higher and more exposed regions are deserted in favour of the better sheltered localities of the lowlands, and particularly those near the sea-shore. In its habits the Meadow-Pipit, as its name indicates, is much less arboreal than the Tree-Pipit, perching far more frequently on bushes, rocks, or low walls than on trees: its flight is similar to that of the Wagtails; but like the Meadow-Pipit it often indulges in an upward song-flight.

The song is not so loud or prolonged as that of *Anthus trivialis*, and the late Mr. Charles A. Witchell says that it "rises crying, *chûwick*, *chûwick*, *chûwick*, repeated many times, and descends singing, *tsee tsee tsee* repeated; or else it changes the accent from the first to the second syllable in the first cries, and ascends with *chuwick chuwick* repeated, with the same ending as before." The call-

note is described as a low clear *ist*, often rapidly repeated, and the alarm-note as a short *whit*.

The nidification of the Meadow-Pipit usually commences in April, the nest being almost always well concealed and invariably on the ground, frequently in a meadow, or on swampy ground among reeds, on a bank half hidden by coarse grasses, and one which I found early in May, containing almost fledged nestlings, was built in the middle of a mass of coarse grass on a mound in an opening near the centre of a dense tangled Kentish shaw; it has also been found in ling; at the foot of a bush; in a cavity under an overhanging bank, or stone.

The materials of the nest consist of dry bents, and sometimes a little moss, with a lining of finer grass or rootlets and hair; like most other nests it varies considerably in bulk and compactness. The eggs are not much unlike those of the Rock-Pipit, excepting that they are smaller; in number they vary from four to six, their ground-tint being greyish or greenish-white, more or less densely mottled with olive-brown, often forming an ill-shaped zone towards the larger end, where also dark hair-lines are frequently present. The Meadow-Pipit is usually double-brooded.

The food of this species in the summer consists of insects and their larvæ, spiders, small centipedes, small worms, and fresh-water mollusca; but in winter when insect-food is scarce, small seeds and even grain are eaten.

Stevenson, in his "Birds of Norfolk," says:—"The Meadow-Pipit or Tit-Lark is one of the most common of our resident species, and generally distributed throughout the country. On heaths and commons, by the banks of rivers, in meadows and marshes, on the grassy summits of our lofty cliffs, or the low marram hills upon the sandy beach, the cheeping note of this familiar bird meets us at every turn, and in more cultivated districts, it springs at our approach from the arable land, and, drifting like waste paper down the wind, is gone with a *yhit*, *yhit*, *yhit*, almost before we fairly see it. In summer it is nowhere more abundant than in the district of the broads, where it sings from the top of the small alder and sallow bushes, which are scattered in many places over the dry marshes, and cheeping as it ascends from a projecting spray, utters its simple but pleasing song, with quivering wings and outspread tail, as it slowly descends to its station again."

The above is the most characteristic description of the Tit-Lark which I have met with, and, therefore, I have not hesitated to quote it for the benefit of those not conversant with this species.

My first experience of the Meadow-Pipit as an aviary bird was in October, 1888, when a bird-catcher brought me a male example which I turned into my outer

aviary: I found it perfectly harmless and amiable towards the other inhabitants of the aviary, until other specimens of its species were associated with it; and, having no mate of its own, it took a great fancy to a Hedge-Sparrow, but the latter had already made up to a Garden-Warbler: I recorded this in the "Zoologist" for July, 1889, as follows:—"I frequently noticed my Hedge-Sparrow following the Garden-Warbler about, and trying to entice him to pair with her; on one occasion I noticed her behaving in a similar manner towards the Pied-Wagtail, but both birds treated her with the utmost indifference; the Meadow-Pipit, however, strutted about in the greatest excitement, and tried in every way to make up to her, though she constantly gave a peck whenever he advanced near to her."

In November, 1889, nine Meadow-Pipits were brought to me by a bird-catcher, who sold them to me at 2d. apiece; they were all freshly netted and very wild. I turned the whole of these birds out with that received the previous year, and hoped that I should have the pleasure of hearing some of them sing in 1890; but first the Hedge-Sparrow attacked and killed several of them, and then they began quarrelling among themselves, fighting like little Game-cocks whenever they met, so that by December only two remained alive, and even one of these succumbed to its injuries before the end of the year, leaving a solitary hen.*

To look at these elegant little birds one would never imagine that they could exhibit evil passions; but my experience clearly demonstrates the danger of attempting to keep more than one male in an enclosure. The female which remained and was so sprightly a bird, that for some months I imagined her to be a male, eventually proved her sex by laying an egg in a nest built by a Canary in one of the bushes, about two feet from the ground: it was an odd place for a Tit-Lark to lay in, but perhaps not so remarkable as the fact that a Canary, turned loose into an aviary, and having no model to guide her, should have reverted to the ancient nest of her species which her ancestors, probably for hundreds of years, had never seen. I am led to make these observations, because Charles Dixon in his "Jottings about Birds," pp. 235-239, is so indignant with those who insist that the architectural power of birds is instinctive. To my mind it is infinitely more difficult to believe that besotted looking sleepy fledglings should be capable of appreciating the intricacies of the nests which they are leaving, and should be able so to fix them in their memories, as (a year afterwards) to be in a position to reproduce them; than that the art should be instinctive. Mr. Dixon has indeed

* This true relation of what occurred in one of my aviaries has been stigmatized as slanderous, and it has been suggested that the aviary contained a "Happy family" collection of vicious Parrakeets, &c.; but I have had far too much experience to play such pranks: on the contrary my Waxbill aviary was the one selected; it is 16 feet long and therefore there was not even the excuse of crowding to account for the vicious behaviour of the Pipits.

shown that some English Chaffinches taken to New Zealand built an aberrant nest there; but this proves absolutely nothing; for abnormal nests are by no means uncommon even in England:—I have a House-Sparrow's nest built like that of a Duck, a large thick-walled open saucer (of the usual materials) placed in the middle of a hawthorn bush; I have a Spotted Flycatcher's nest built in a narrow crevice in a brick-wall, and formed like a slipper; with several other aberrant nests to be mentioned later in the work: I have also proved that Goldfinches and Grey Singing-finches in an aviary, prefer building their nests upon the floor of a Hartz-Canary cage, to utilizing a bush. These facts clearly show that birds do not build by imitation, but distinctly inherit and adapt their parents' handicraft, just as, in a lesser degree, human beings do; for it is a notorious fact that many artists are able to trace their power to a direct ancestor, whether in painting, music, or even logic. Moreover, as study is necessary to perfect our gifts, so also with young birds several nests are often commenced and pulled to pieces before a satisfactory result is attained. The bird in the nest sees next to nothing of its character, the lining only is constantly before its eyes, and the lining is that part of the structure which is formed mechanically, by the squatting down and twisting round of the parent bird: how then, even if it had a retentive memory, could it learn the method of construction of the complete outer walls. To my mind this is infinitely more inconceivable than that the power to build a certain type of nest shoud be inherited; the fact that heredity is not incapable of modification, or blind, would explain why a bird was still able to adapt the outline of its nest or even the materials to altered conditions.

Family—MOTACILLIDÆ.

THE RED-THROATED PIPIT.

Anthus cervinus, PALL.

SEEBOHM rightly says that this bird has scarcely any valid claim to be regarded as a British bird. The first example recorded was obtained at Unst, in 1854; a second was shot at Rainham, in Kent, in April, 1880; a third was caught at Brighton, in 1884; and a fourth was obtained in Sussex, in 1895. The species being a mere chance straggler to our shores when on migration, and very rarely met with, a description of its habits would be out of place in the present work.

Family—MOTACILLIDÆ.

THE TAWNY PIPIT.

Anthus campestris, LINN.

IT is quite possible that this species has been merely overlooked; inasmuch as, since its first discovery as an accidental visitor to Great Britain by the late Mr. G. Dawson Rowley, a good many specimens have been obtained.

A summer visitor to Europe, this bird is said to breed in suitable localities as far north as lat. 57°. In Northern Africa it appears to be partially resident, its winter migrations extending through Egypt to Nubia and Abyssinia: in Western Africa it is known to migrate as far as Damaraland. In Palestine it is resident, and from Asia Minor it extends to Turkestan and North-western India.

In Great Britain most of the examples of the Tawny Pipit which have been obtained have occurred at or near Brighton, but it has been shot as far to the south as the Scilly Islands, and as far north as Bridlington, in Yorkshire.

According to Gätke this species "visits Heligoland in very small numbers; only now and again may a solitary example be met with on a fine warm afternoon in May or August. Hardly more than three or four of the birds are shot in the course of a year, though perhaps double the number, certainly not more, may occur during that time."

The adult male in spring plumage is of a lighter or darker sandy-brown colour, the centres of the feathers on the upper surface being darker, excepting on the rump, darkest on the crown; a buffish-white superciliary streak; lores dark-brown; ear-coverts greyish-brown; wing-coverts dark-brown, edged with buff; flights brown, with tawny edges; tail brown, the two outside feathers white, suffused with sandy-brown; the inner web partly brown; the second pair brown almost to the shaft: under surface buffish-white, deeper on the breast, which is faintly streaked with brown; upper mandible dark-brown, lower mandible yellowish; feet yellowish-brown; iris dark-brown. Female similar to the male but slightly smaller. After the autumn moult the colouring of both sexes is warmer. Birds of the year are more tawny than adults, and have the sides of the throat and breast somewhat conspicuously streaked.

As regards the haunts of this species, Seebohm says that in Greece "it seems to prefer the open plains, and is very common in the almost treeless valley between the Parnassus and Thermopyle." "It is especially common on the undulating prairie country, half rock, and half grass and heath, between Athens and Marathon."

Dixon ("Jottings") speaking of it in Algeria, says that it is "most abundant in winter. It breeds on the northern slopes of the Atlas, and in winter does not appear to go further south than the Hauts Plateaux." Of its habits, the same author says:—"To look at its plumage one might almost expect to meet with it only in the desert; but in summer, at any rate, it does not frequent that sandy waste, and we only met with it on the elevated plateaux beyond Constantine and in the neighbourhood of Batna and Lambessa. The road between these two latter places runs through rich meadows and barley-fields, and abounded with Tawny Pipits in abundance. I saw them only in pairs; they were very tame, and often allowed themselves to be almost trodden upon before they would take wing. I often saw them running about very quickly over the bare pieces of ground, stopping now and then to look round to see if they were being pursued. When flushed they would often fly for a little distance in a very straighforward manner (not undulating, as their usual flight is) and perch on a little tuft of higher vege-

tation, or on a boulder, or even a paling. Many of the birds were on the road, where you could witness their actions very closely as they ran up and down like a Wagtail, often giving their tail a sharp jerk, accompanied by a flicking movement of the wings. They seemed to especially prefer a large unenclosed plain of rough land on which no crop was sown, what we should call summer-fallow in England. Here I repeatedly saw the birds soar into the air for a little way and sing their loud but simple song, which put me in mind of the Sky-Lark's notes, although not so rich or so sweet. It does not soar so high as the Tree-Pipit, and seems anxious to get to the ground again. When alarmed by the report of a gun, the birds close at hand would generally rise for some distance into the air and betake themselves to safer quarters in a drooping flight, uttering a short *whit* or *yhit* as they went."*

Col. L. H. Irby, speaking of Tawny Pipits on the Spanish side of the Straits of Gibraltar, says:—"We never met with them on low ground, and there is no doubt they breed high up on the sierras."

The Tawny Pipit is a late breeder, building its nest towards the end of May under a shrub, amongst growing crops, beneath a tuft of rank herbage, or under the shelter of a stone or clod of earth. The materials of the nest consist of dry grass, bents, and roots, with a lining of horsehair: the eggs number from five to six, greyish-, or creamy-white, streaked or spotted somewhat heavily with dark-grey and purplish-, or reddish-brown.

The food consists principally, if not entirely, of insects and their larvæ, and doubtless of spiders and small centipedes, as is the general habit of insectivorous birds.

I should not anticipate that much satisfaction would be obtained from keeping the Tawny Pipit either in cage or aviary, unless its natural tameness induced it to sing: my Tit-Larks, although by no means unusually wild, never once sang in confinement; yet they were in an aviary 16 feet long: their only charm, therefore, consisted in their graceful actions, both on the ground and when flying; but neither in colouring or grace can they at all compare with Wagtails.

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* O. V. Aplin (Zoologist, 1892, p. 14) says:—"Alarm-note *chit, chit;* song short, but with a few rather good notes."

Family—MOTACILLIDÆ.

RICHARD'S PIPIT.

Anthus richardi, VIEILL.

SINCE 1824 this species has been so frequently met with in Great Britain that, although only an autumn straggler to our shores, it has fairly earned its title to be considered a British bird: as regards its distribution on the Continent, Howard Saunders says:—"Richard's Pipit has been met with, as a rare straggler, in the southern districts of Norway and Sweden; but on Borkum, Heligoland, and along the coasts of Holland, Belgium, and France, it is not uncommon on migration. In Central Europe it is rare, though in the south of France, especially in Provence, it is not unfrequent; near Malaga and throughout the south of Spain it is in some years tolerably common from November to April; while it occurs irregularly in Italy, and in the basin of the Mediterranean, occasionally visiting North Africa. Its usual breeding-grounds are not to be found west of Turkestan; in the valley of the Yenesei, Mr. Seebohm found both old and young in August, up to 58° N. lat.; and it nests abundantly on the elevated steppes of Eastern Turkestan, the Lake Baikal district, and Mongolia. In winter it visits South China, Burma, and the Indian region.

The first recognized British specimen of this species was caught near London, in October, 1812, and was recorded twelve years later; since then sixty or more specimens have been noted, mostly from the south of England, and more particularly from the coast of Sussex; it has also been met with in Lincolnshire, Norfolk, Oxford, Warwickshire, Shropshire, Lancashire, Cumberland, and Northumberland: in Scotland it is said to have been seen in Banffshire.

When in breeding plumage Richard's Pipit above is of a sandy-brown colour; the feathers, excepting on the rump, with dark centres; those of the upper tail-coverts ill-defined; wing-coverts tipped with tawny; flights margined with buffish-white; two outermost tail-feathers white with dark margins to the outer webs, the second pair also with dark shaft; remaining feathers dark-brown, the central pair with pale edges; under surface white, faintly tinted with buff, excepting on the breast which is distinctly buff, and streaked with dark-brown; a line of spots also running up the sides of the neck to the base of the bill; the latter is dark-brown,

RICHARD'S PIPIT

PLATE 52

the lower mandible paler: feet pale horn-brown; iris hazel. The female is a little smaller than the male, but similarly coloured. Young birds have whiter margins to the feathers, and the under-surface streaking is more defined, extending also to the flanks.

Speaking of the habits of this species in Siberia, Seebohm says:—"It delights in wet pastures and rich meadows left for hay in northern climates, where the harvest is late, and it can build its nest in the long grass, and rear its young before the mowers come to disturb it, and where it can find abundance of food in the short grass after the hay is cleared away, just when the young are most voracious. These conditions it finds to perfection in the flat meadows that stretch away, often for miles, on the banks of the great rivers of Central Siberia, and which are overflowed for some days when summer suddenly comes, and the snow melts, and the ice on the river breaks up. I found Richard's Pipit extremely abundant in the meadows on the banks of the Yenesay, near Yenesaisk. The country is almost a dead flat for miles, and is intersected with half dried-up river-beds and chains of swampy lakes, full of tall sedges and reeds and water plants of various kinds, and half concealed by the willow bushes and alders, whilst far away in the distance the horizon is bounded on every side by the forest. These oases of grass in the boundless forest are the paradise of Richard's Pipit."

Speaking of it in India, Jerdon says:—"It always affects swampy or wet ground, grassy beds of rivers, edges of tanks, and especially wet rice-fields, either singly or in small parties. Its flight is strong and undulating, and it flies some distance in general before it alights again."

With regard to its note Brook states that it is "a soft double chirp, reminding one strongly of the note of a Bunting." Dr. Scully says that its note as it rises from the ground is a sweet soft twitter: the call-note is said to be "soft but loud." Herr Gätke however observes:—"According to my own experience, extending over more than fifty years, during which time thousands of these birds have come under my notice, this call-note consists of a loud, rapid and harshly ejaculated *r-r-rüüp*, sounding, in the case of young birds, almost like *r-r-reep*; this is confirmed by the local name of this bird which is derived from its call-note. This note the bird utters only once at every rise, except in some rare cases when, after being surprised, it rises suddenly, repeating *r-r-rüp-rüpp* several times in quick succession. As the bird flies almost always at a good height, and its extremely original call-note is audible at a great distance, it betrays its presence to the shooter while still far away; when the call-note is no longer heard, one may conclude with certainty that the bird has settled on the ground.

In the manner of its flight this Pipit partly resembles the Wagtails, partly

the Larks. If it is flying over a considerable distance at a not very great elevation, it progresses in wide and shallow undulations, not, however, in so striking a manner as the Wagtails. Its flight at considerable elevations is more like that of the Larks. Arrived at the goal of its flight, the bird executes a fluttering or shaking movement before descending, previously for a moment surveying the place on which it intends to make sure that no danger is lurking for it there. In the course of its elevated flight it frequently halts for a moment in a similar manner."

The nest of this species, which appears not to have been described, but which doubtless resembles those of other Pipits, is built early in June in a depression in the earth among grass: the eggs, which number from four to six, are greenish-white or pinkish-white, spotted and blotched with various shades of brown: they somewhat resemble those of the Rock-Pipit excepting in size.

When on the earth Richard's Pipit progresses much in the same fashion as its allies, by running; its food also consists chiefly of insects, their larvæ, and doubtless of spiders. Captain Legge states that in Ceylon it often seizes a passing butterfly on the wing. In an aviary it would doubtless eat the same soft food as that already recommended for insectivorous birds.

Gätke says:—"I kept a young autumn bird of this species, slightly grazed on the wing by a shot, for several days alive in a large cage, in company with several Buntings and Finches, with which it agreed very well, The bird was not at all shy or wild, but ran about nimbly and cheerfully, and also accepted readily, and within my immediate neighbourhood,* some maimed flies which were offered it. Unfortunately, I was not prepared for maintaining an insect feeder, and, much to my chagrin, was obliged to kill it, so as to avoid torturing it uselessly. I was the more sorry for this, as I felt convinced that I could quite easily have kept it alive with ants' eggs, for it is a hardy and by no means a delicate bird."

If Herr Gätke had only been aware of the fact that all insectivorous birds are passionately fond of yolk of egg, and that it suits them well, he need not have been unhappy, or unnecessarily have taken the life of his pet; moreover, with a canvas bag at the end of a stick, he could (in a few minutes) have swept up as many insects, spiders, etc., as would have provided his Pipit with a substantial meal. Meanwhile, he could have written for a supply of dried ants' cocoons and preserved yolk of egg; and on this diet, with the addition of bread-crumbs and potato, his bird would have lived happily through the winter. The moral of which is that before attempting to keep birds, one should know more about them than can be learnt from purely scientific works.

* This strikes me as a bad translation, it should (I think) be—"when I was close to it."—A. G. B.

Family—MOTACILLIDÆ.

THE WATER-PIPIT.

Anthus spipoletta, LINN.

ONLY four examples of this species, all from Sussex, has been recognized: I, therefore, do not consider that (at present) it has much claim to be regarded as British: at best it is but a chance and very rare straggler to our shores.

Family—MOTACILLIDÆ.

THE ROCK-PIPIT.

Anthus obscurus, LATH.

SEEBOHM says that the "Rock-Pipit is little more than a coast-form of the Water-Pipit, and appears to be confined to the rocky portions of the coasts of North-Western Europe, from the White Sea to the Bay of Biscay. It is found on the shores of the Baltic; but there is no satisfactory evidence of its frequenting those of the Mediterranean. It is a resident throughout its range, except in the extreme north."

"The Rock-Pipit is a resident on all the coasts of the British Islands, with the exception of the low-lying eastern shores south of Spurn, where it only appears as a straggler or on migration. It is found commonly in the Channel Islands, in

the Hebrides, St. Kilda, the Orkneys, and Shetland, and is also common in the Faroes, although not known to visit Iceland or Greenland."

John Cordeaux in his "Birds of the Humber District," says that this species "Occasionally occurs during the autumn within the Humber, either on the sea embankments or along the borders of the marsh drains."

This apparent discrepancy between the statements of Seebohm and Cordeaux is explained by Howard Saunders, who observes:—"generally frequenting, during the breeding-season, those portions of the sea-coast which are of a rocky nature-conditions which are not found between the Thames and Humber; although during autumn and winter it is found on salt-marshes and in the muddy estuaries where there is sea-weed."

The adult male in the spring is olive-brown above, streaked, excepting on the rump, with dark-brown, the outer pair of tail-feathers is characterized by an oblique smoky-grey patch on the inner web;* an ill-defined buffish superciliary stripe; chin whitish; remainder of under surface buff, warmer on the breast, and more olivaceous on the flanks, which, together with the throat and breast, are streaked with dark-brown: bill deep-brown, the lower mandible paler at the base; feet brown; iris hazel. The female resembles the male but is probably smaller. In the autumn the plumage of the upper parts becomes more olivaceous and that of the under parts yellower. The young are more heavily streaked on the flanks than adults.

As I never had an opportunity of studying this bird in its wild haunts—the cliffs, rocks, and lowlands of our sea shores, and the desolate islands near our coasts—consequently I never personally took its nest; it was, therefore, with great pleasure that I examined a series of clutches of the eggs obtained at Uist, in May 1884, by Mr. T. Copeland, and forwarded by him to Mr. Harting. A clutch of five eggs was subsequently presented to me by Mr. Copeland.

Gätke (The Birds of Heligoland) says that this species "is a solitary, serious creature, little caring for the society either of members of its own or of other species. While searching for food, it walks step by step, only rarely at an accelerated pace, over the sea-tang on the shore, or on the rocks and *débris* exposed at low tide at the base of the cliff. It utters its call-note only when taking to flight, a single call repeated after rather long pauses. The note is deeper and longer drawn than that of the Meadow-Pipit, and has an agreeable sound, by no means harsh like that of the Tree-Pipit; if the bird is suddenly surprised, it often in flying away utters its call two or three times in succession. It is by no means a shy bird, and never flies very far; if repeatedly disturbed while busy at the foot

* In the Water-Pipit this patch is white.

of the cliff, it flits from one piece of rock to another, never more than fifteen or twenty paces at a time, finally perching on a prominence half way up the face of the cliff, where it will quietly wait until one has passed along underneath it, after which it will resume its occupation on the shore."

Regarding the song of this species, Seebohm says:—Like all the other Pipits, the Rock-Pipit seldom sings except on the wing. When it is in full song its notes are very musical, and rival those of the Meadow-Pipit, but can scarcely compare with those of the Tree-Pipit, either in variety, richness, or duration. In the pairing-season the Rock-Pipit sings incessantly, mounting into the air and gliding down again to his rocky perch on fully expanded wings and tail. The first really fine day in early spring is the signal for the commencement of the song, and it is continued until the young are hatched. The call-note of this bird is a shrill *hist* or *pst*, most pertinaceously kept up if it is seriously alarmed or its nest is in danger. This call-note is uttered both when the bird is sitting on the rocks or the ground, or when fluttering in the air; and it often soars to the zenith of its flight uttering it quickly, and then returns to its perch in full song."*

Mr. O. V. Aplin (Zoologist, 1892, p. 14) speaking of the Alpine Pipit, says: "The song reminds one of the Rock-Pipit's, to which I had been listening at Dover—*zig zig zig zi zi zi zi*, running down and becoming quicker at the end."

The nest is generally formed towards the end of April, on or close to the sea-shore, but sometimes in a cavity several hundred feet up the side of a cliff; it is often placed in a crevice in the rocks, or in a wall, a hole in a bank, a rabbit-burrow, in a clump of sea-pink, or behind a heap of sea-weed. The materials vary according to its situation, the basis being dry grass, sometimes intermingled with sea-weed, the stalks of various plants, or moss; and lined, either with fine grass or hair. The eggs vary in number from four to five, and in colouring exhibit much the same variations as eggs of the Sky-Lark, the ground colour being greenish-white, speckled all over with grey, and usually mottled (most densely towards the larger end) with olive-brown: some eggs are heavily blotched and some are zoned, the general tint is also sometimes redder than usual, but I have not hitherto seen the variety described by Howard Saunders—"reddish ones, like those of a Tree-Pipit," unless he means the reddish-tinged (and not the reddish-chocolate) variety of that bird's egg.

The food of the Rock-Pipit consists of insects and their larvæ, but more especially the flies which are attracted to rotten sea-weed, also the innumerable

* This statement seems to imply that the call- and alarm-notes are identical: if true, this is a somewhat aberrant case.—A. G. B.

small mollusca and crustacea to be found among sea-weed and occasionally seeds, but particularly in winter.

Swaysland has kept the Rock-Pipit in confinement, and recommends that it should be fed in the same way as a Wood-Lark; but the food which he advises to be given to all insectivorous birds is in the highest degree unnatural, consisting largely of chopped raw meat, German paste, etc. I have not the least doubt that any of the advertised egg-foods, mixed with bread-crumbs and moistened, would be infinitely more wholesome as a staple food: to this I would add for the present species, cockroaches, mealworms, spiders, centipedes, and caterpillars, as well as small snails. Although most birds do not care for woodlice, it is not improbable that the Rock-Pipit would eat them.

Being considerably larger than the Meadow-, or Tree-Pipits, it would be necessary to use judgment as to the associates of this species: moreover, as the gentle looking Pipits are even more pugnacious than Wagtails, it would be very unwise to place two males together in the same aviary. Even one male should be watched at first, for individuals of the family *Motacillidæ* sometimes make things lively for an aviary full of birds twice their own size, and infinitely more powerful than themselves.

END OF VOLUME ONE.

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